THIS MONTH'S LIST: 249 PRODUCT SUPPORT BBS

June 1992

# BOARDWATCH MAGAZINE

Guide to Online Information Services and Electronic Bulletin Boards

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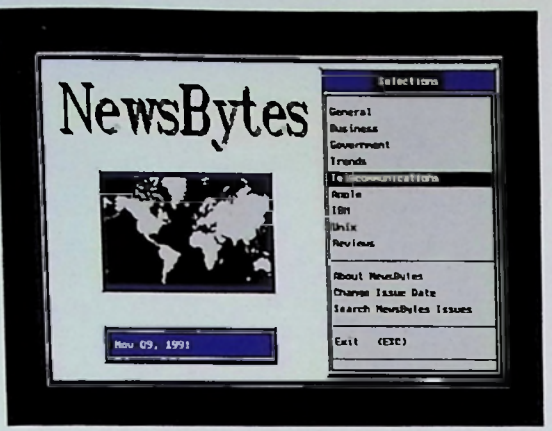


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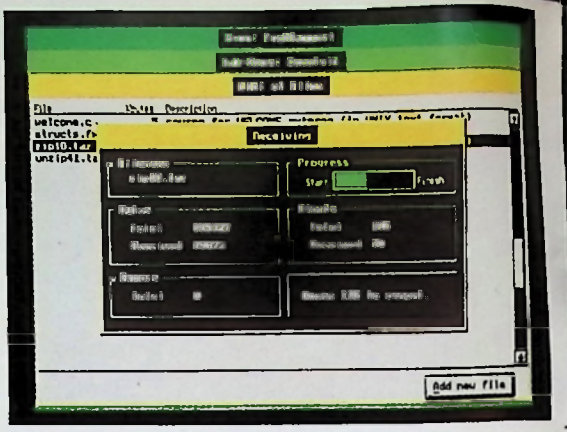

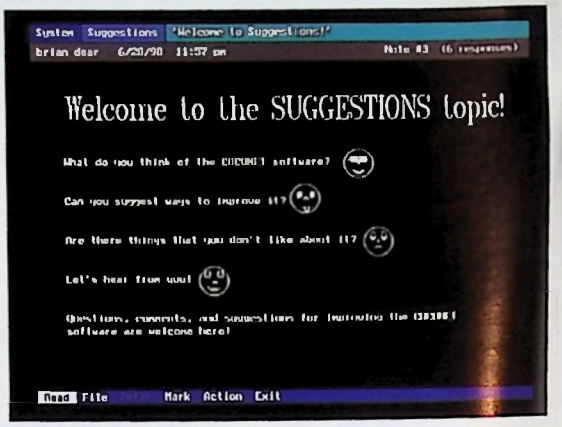


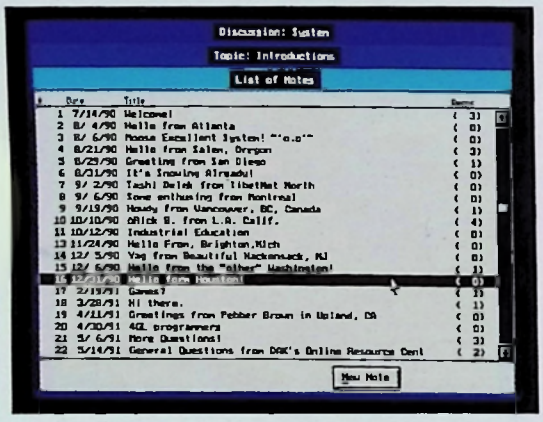

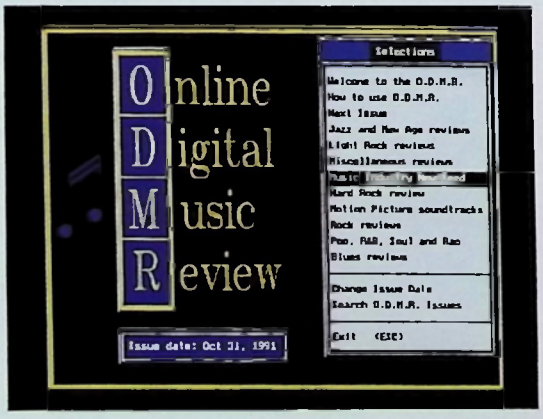


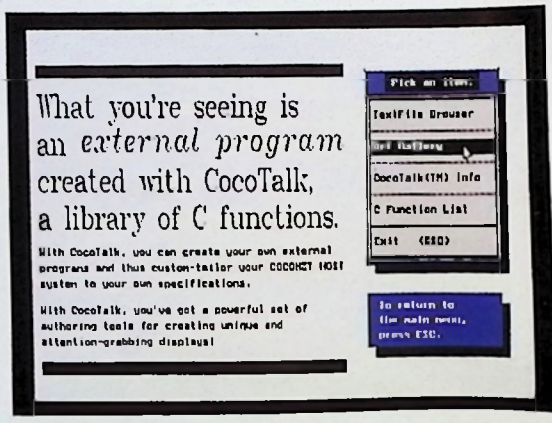

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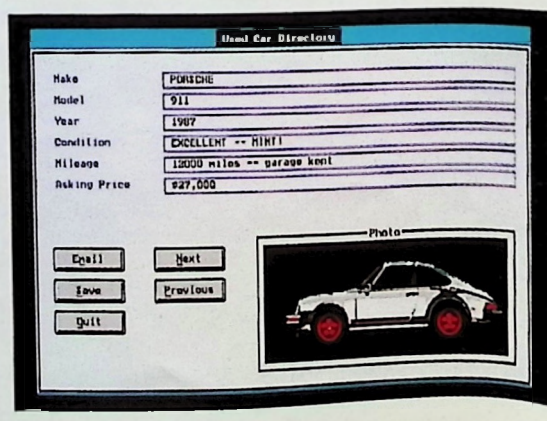


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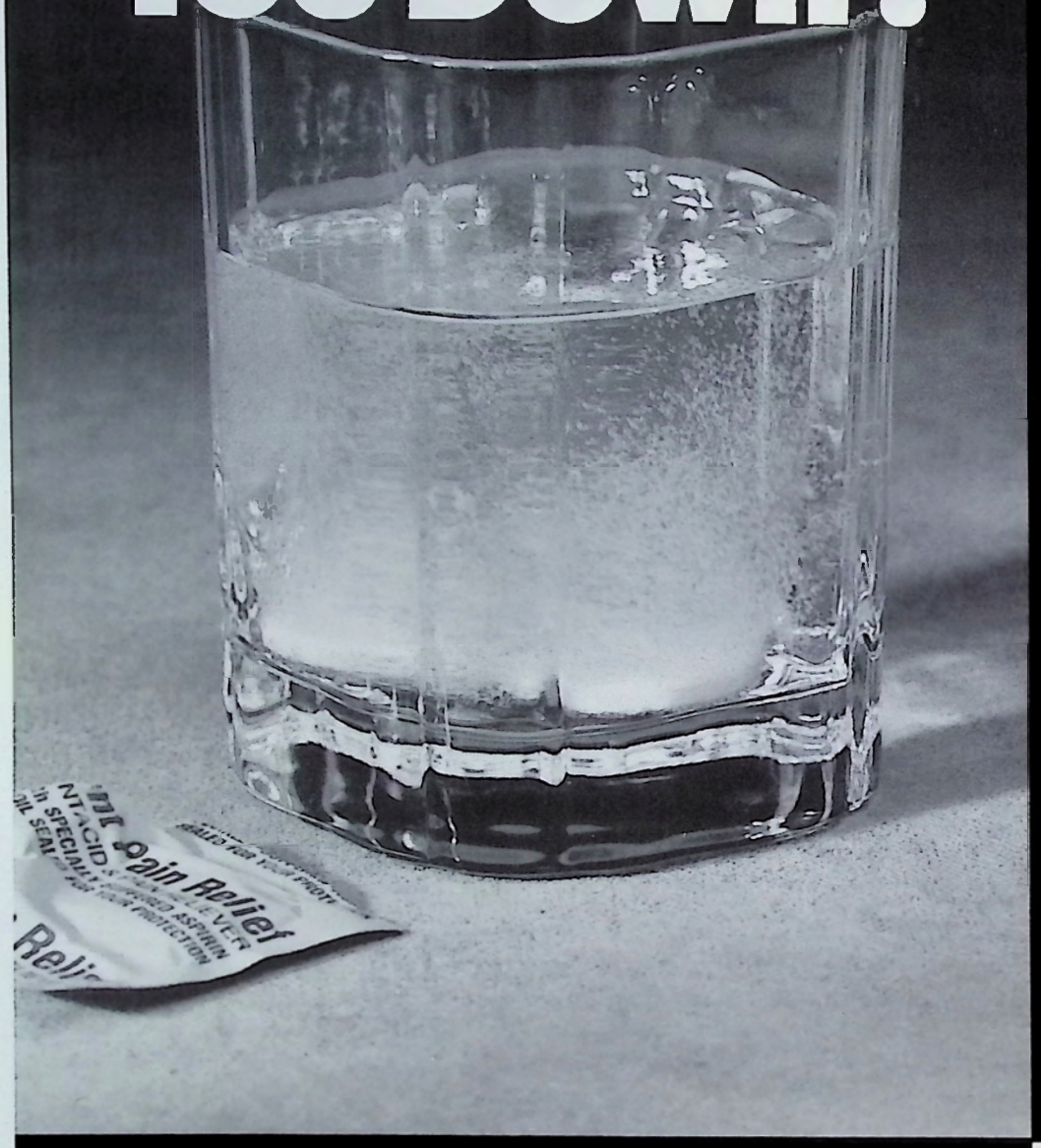


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# BOARDWATCH MAGAZINE


***EDITOR'S NOTES - The Vision Thing*** ..... 6
***LETTERS*** ..... 9

***TELE-BITS***
*Prodigy Numbers* ..... 16
*CompuCom Bites the Dust* ..... 17
*AT&T Announces CODEC Chipset* ..... 20
*Cheap RS-232 Serial Card* ..... 20
*Gateway 2000 Announces $195 V.32bis Modem* ..... 22
*Searchlight Software Offers Definable Menus in New 2.25 Release* ..... 22
*OS/2 Now Available* ..... 22
*Data Via Cellular - New Plan* ..... 22
*U.S. Robotics Enjoys Record Sales/Profits* ..... 23
*FidoCon Set for Dallas - September 4-6* ..... 23
*Wildcat! Version 3.5 Due June 21* ..... 23
*Hayes Announces ISDN Sysop Discount Program* ..... 25
*Wes Kussmaul to Address ONE BBSCON* ..... 25
*Fun Fax Phone Facts* ..... 25
*Intel Intros 20 MB Credit Card Memory Device* ..... 26
*Mustang Maintains Wildcat! BBS List* ..... 27

***SHAREWARE FINDS - Windows 3.1 Add-Ons*** ..... 27

***MACINTOSH BBS NEWS***
*Extra Serial Ports for the Mac* ..... 33
*At Least Appear Busy* ..... 37
*Mac Board of the Month - Johns Hopkins University JHUBBS* ..... 39

***LEGALLY ON-LINE - Playboy's New Playmate - Event Horizons BBS*** ..... 39

***THIRD PARTY SUPPORT FOR THE BREAD BOARD SYSTEM*** ..... 42

***INTERNET NEWS***
*EZ-Mail - Internet Mail from Windows 3.1* ..... 48
*Supercomputing Review BBS* ..... 51
*Managing UUCP and Usenet* ..... 52
*ARCHIE - Internet Archive Listing Service* ..... 53
*Elvis's E-Mail Address* ..... 54

***DIRECT DIAL BBS***
*The Garbage Dump BBS - Forging New Links in the World of Chat* ..... 55
*GIFFY GIRLS - Avoiding the Copyright Issue* ..... 57
*65' North - DESQview File Distribution Network* ..... 58

***THIS MONTH: PRODUCT SUPPORT BULLETIN BOARDS - List of 249*** ..... 58
***Boardwatch List of BBS List Keepers*** ..... 69
***Boardwatch National Select List of Bulletin Boards*** ..... 74

***COVER PHOTO - Peter Stern of 65'North - Fairbanks Alaska***



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# EDITOR'S NOTES

## THE VISION THING

I received some comment concerning my rather gloomy article in last month's issue regarding the House Science Committee hearings on the Internet held March 12th. In re-reading the article, I confess I don't feel the slightest bit more optimistic, but recognize that without some background it might not make a great deal of sense to those reading it.

The gist of the malaise revolves around a view of our economy I've developed over the past year that is at once promising and a bit troubling. It's based on an observation of the slow maturation of economic models as they progress from "markets of opportunity" to commodity markets. For example, at one point in our nation's history agriculture was an area of enormous opportunity. With a bit of land, widely and cheaply available on the American frontier, a young man who wished to devote a little smart thinking and a good bit of work could build a relatively wealthy lifestyle for himself within a few years from the products he grew from the ground or raised through animal husbandry. It wasn't easy, and not everyone did it, but the opportunity to do so was there. And those that did it were the economic backbone of the nation.

The primary problem these agriculturists grappled with was getting their products to the people who consumed and paid for them, and many of our nations byways of commerce were developed specifically to accommodate the flow of these products to market.

As more people took advantage of the opportunity, and those doing so learned to produce agricultural products with more efficiency, agricultural produce became a commodity - products that fetched on the free market just slightly more than the costs of production. Actually, at several gruesome points in our history, they fetched LESS than the cost of production. To this day, we maintain an intentional oversupply of agricultural goods through various government programs to support the price of commodities above what the market normally would - even to the point of paying farmers NOT to farm on a percentage of their land. In theory, this ensures an oversupply of food. Given my own personal inclination to eat every day, I probably favor this policy although clearly some of it is historically dated and subject to abuse.

As agricultural goods became commoditized, the economics of opportunity were found in manufacturing and industrial production. A man with a good idea and a bit of inventiveness could manufacture and sell washing machines, modern farm equipment, sewing machines, and consumer goods at high markups over the cost of production. They could start such ventures for relatively little money. And huge fortunes were amassed in such industries for a dozen decades.

And individuals could do very well for themselves by securing a "position" with a manufacturing firm and exchanging their personal services for a salary. Huge manufactories were formed to take advantage of enormous economies of scale developed by buying materials in large quantity, automating repetitive processes, and in general, building huge quantities of the widget in question.

Today, most of our woes in manufacturing are blamed on foreign competition. This is probably true as far as it goes but it is simplistic and suggests solutions that will inevitably fail to be effective. The underlying process is pretty well irreversible and natural as I see it - the maturation of most standard manufacturing processes toward commoditization.

Automobiles serve as a prime example of this process. Critics bemoan the loss of 74,000 "good" jobs in automotive manufacture this year through General Motors plans to shut down 21 manufacturing plants. A loss true enough. But actually, most of the work in producing those automobiles doesn't even happen in Detroit or at the assembly plant. Hundreds of smaller factories across the land actually manufacture the axles, seats, electrical harnesses, headlight assemblies, exhaust system components, gaskets, and other piece parts that are assembled at those plants. These small manufactories employ millions of workers - none at the $40,000 per year level - most at $7 per hour and the workers couldn't afford one of these cars in a million years. Worse, the factories and jobs themselves hang by a thread - these guys are selling axles to Detroit at $740 and it costs them $728 to produce one. If a Brazilian firm comes in and offers the same axle at $710, which by paying workers $1.40 per day they can do, all that's left to do is close the doors, send everyone home, and fill out the paper work. Competing in this commodity market means automating the process to ensure that American workers are $56/$1.40 more productive - less transportation costs. As the technology and know how to do that expands to third world countries, this will become increasingly difficult to do - the law of diminishing returns run amuck. The message is that to compete with Brazilians, you must be prepared to live like Brazilians. Pass - thanks.

You can take apart all the possibilities for tariffing imported axles, penalizing Brazilians, and inaugurate all the "buy American" programs you like. It's like shoveling water uphill. You're fighting the inevitable flow of an economic evolutionary process. Where there is opportunity, someone will fill it and when enough someones fill it - the price margin is wiped out to a commodity level. With the advances in transportation and communication over the past few decades, the pool of "someones" has become global.

Mentally, I picture this as "letting the air out" of markets of opportunity. As they mature, they will become denser with participants and scanter in price margin. At some point of density, there is little or no opportunity and the market begins to actually cannibalize its participants in a frenzy of final search for the best and most efficient price.

As the margins disappear from manufactured goods, large corporate entities are forced to "trim the fat." Thousands of managers and white collar workers are being promoted to the street from their $30,000 to $50,000 jobs. Unlike the $7 hourly worker, they are not only displeased, but vocal about their problem - ergo the current deep concern about jobs with an unemployment rate statistically not very alarming. While there are actually plenty of jobs, we have

a lot of $50,000 per year middle managers now running video rental stores at $6 per hour - not a good thing at all.

Today, our country faces a forced transition to an information economy. While the axle builders struggle to squeeze another $2 profit out of their axle, and their workers live in fear of losing even their $7 per hour, and the ex-middle managers grapple with the rigors of where to find "Debbie Does Dallas" on the video rental rack, an ever increasing number of companies are shipping boxes of software out the door that cost them $45 a pop to "manufacture" and draw $700 per copy from the purchasers. Or they sell their expertise at $200 hourly on how to get axles from Brazil to Detroit to auto assemblers - under the title of "consultant" - not "information worker" but the premise remains the same. The high margin areas of opportunity are ALL in the information game from one end or another. The computer industry overall now accounts for more than 10% of our GNP and yes, it has surpassed the manufacture of automobiles as an economic engine. Medicine? Same game, different name. What do you know and what will it cost me to get it?

The problem with the transition is that an awful lot of people get left out. If the citizens of South Central LA weren't able to get a job making automobile axles, they will surely be in worse shape yet in designing software, designing automated axle making machines and control software to sell to Brazilians, and trading in information about who's got axles cheap and who can deliver tomorrow. I think the information economy has unlimited opportunity over the next twenty or thirty years and can absorb an UNLIMITED number of bodies, but they have to be pretty well trained bodies.

And just as agriculture needed railroads, an excellent commercial water byway system developed by the Army Corp of Engineers, and a rudimentary road system to bring products to market, the manufacturing age also needed commercial byways such as an airport system, an Interstate Highway system, telegraph and telephone service, to function to its potential.

There are realistically only two areas where government can rightly and efficiently aid the transition to an information economy. They are in education and in establishing commercial byways for the flow of this new form of commerce. Those are the ONLY things I can see that will AID it. Most anything else it does can only hinder.

We need to revise wholesale our concept of education in this country from the formal 12 to 16 years now implemented to a system of lifelong educational opportunity. The concept of that 29-year-old $7 axle worker buying a $65 textbook is preposterous - never mind the $76 hourly tuition fee, parking fees, activity fees, etc. The BOOK is a budgetary expense beyond what he can aspire to. It is completely beyond the reach. And we've been going the WRONG direction in this area. When I left the United States Navy (15 years ago), Uncle Sam was standing there waiting to pay $400 monthly for me to go to school part time in the evenings. All the GI bill educational benefits I had are no longer available at all. They have a savings program, but it's not nearly the same. Let me propose something radical - you want to go to school to learn a skill that will get you out of making axles - we'll send you. You still have to make axles to eat, but the cost of books, tuition, and parking fees should not serve as a barrier. And our nation's schools should be dramatically encouraged to educate adults - not just children. Cradle to grave education at all levels - publicly funded.

Expensive? I'm going to guess yes. Options? We're out of them. Oh, there is the option of fighting a civil war between the high tech information workers and the inner city blacks. I mentioned this to a congressman in the family about a decade ago and got a blank stare in response. I think he thought I'd been drinking too much - I know he had.

But my real concern revolves around the establishment of a commercial byway for information. There was for a brief moment a vision, espoused by the highest offices of government in this country and numerous proponents within the industry, of a universal, high-speed (Gigabit) data network connecting every school, every home, every office, and as I recall Senator Albert

Gore's words, sufficient to allow his granddaughter to access the entire Library of Congress from a home terminal or terminal at her school. It was debated for several years, watered down a little, and signed into law by President Bush last December 20th. I fear he had not the slightest idea of what he was signing, but vaguely was assured it was a good thing nonetheless and signed it. Another of his many acts of reckless courage I'm sure. But it got signed.

No sooner was the ink dry than the entire vision was scrapped wholesale and a squabble began over what commercial company got to sell pieces of the CURRENT Internet network - a shadow by any stretch of the imagination of what is needed. A gossamer spider web SUGGESTING a universal network - not serving as one. A model. A metaconcept really. But a swarm of small minded men gathered to assure the government that it was not "pre-competitive", that it was ready for them to sell it, and in fact government money wasn't needed AT ALL to further this network. The private companies could do it better, if they were only allowed to sell what government funds had already built. And there was some question as to who got to sell what part of it and why. Those at some perceived disadvantage in this national lottery wanted a level playing field while those with the upper ground insisted that the free market could adequately police the situation.

In the late 1950s, our political leaders embarked on a program to bind the nation with a network of Interstate Highways, funded and paid for in tax dollars, all built to a set of specifications for acceptable grade and curve, with a minimum number of lanes - and free of tolls or charges for both commercial and private traffic. It cost frightfully more than we could ever possibly afford at the time. But based on a vague sense of military importance fostered by the cold war jitters of the day, it was funded and was built. It was in fact built by private companies, but to government specifications, timetables, and financed by the government. None of the contractors wound up owning it or able to sell access to it.

I recall as a young child standing watching R.B. Potashnik Construction Company in Cape Girardeau Missouri work on the new Interstate 55 - struggling desperately in my own mind to figure out how or why ANYONE would think to build what looked to me like TWO highways both going in exactly the same direction and in parallel. WHAT A COUNTRY!

But it reduced the time to transport goods coast to coast from more than a week to less than three days. It saved hundreds of thousands of lives from the terrible crashes common on the winding, hilly two lane highways. And it let manufacturers nationwide transport goods more quickly, efficiently, and in smaller more flexible loads by truck - instead of by railroad. They controlled departure and destination times better. There was much less incidence of things getting "lost" for days in the railroad system and found later sidetracked somewhere - and spoiled or damaged. It was much easier to build feeder roads to the system than to the "railhead." And EVERYBODY got to use it - for good or ill, for commerce or entertainment, for a trip to St. Louis just to see the Gateway Arch.

The economic boon this highway system was to the developing economy of the 1960s and 70s is simply incalculable. Each new variable you take into account adds hundreds of billions to the total. We never did use it for anything particularly military. It neither helped nor hindered the cold war in any direct fashion. But it was quite directly an invaluable commercial byway for every manufacturing effort of the last three decades. Drug runners and fundamentalist revival preachers, rock stars and insurance salesmen all used it at the same or various times to get where they were going quicker, safer, and cheaper for their own purposes good or ill. It wasn't easy to build. I've known people all my life who were still working on it and in places, it isn't finished yet. It was a grand project. And a worthy one. It repaid its cost a thousand times over.

From what I gathered from the March 12 hearings and events all around since December 20, we simply don't have the leadership and vision to build an electronic Interstate Highway system. There are no big kids to paint this vision for us and convince us it is a thing needed by the economic times we live in. A squabbling band of selfish small minded shopkeepers are trying to decide who gets to sell access to the on-ramps and have forgotten entirely to build the highway at all. They were there in 1957 as well, R.B. Potashnik among them no doubt, but a few individuals of leadership and vision stood up and said "Here's what it would look like and here's why we need it and we're going to get it done." And it was done. They had Republicans and Democrats then too, corruption, partisan politics, all in a measure equal to or greater than today. But they also had a few leaders of vision and courage.

Where did those guys go? Died? No forwarding address? No heirs or apprentices? It's not like it takes 435 of them - just a few.

Our current telephone service monopoly structure, and our current political leadership, is mired in a deadly game of "who's on first" and "what's in it for me." It would be ok if the only impact was on who our long distance carrier was and how much it cost to call Aunt Grunhilda. But it's not. Those who will lead us economically into the next century are all in the information game and they need a commercial byway of national, if not global scope. Of commonly established standard and technical excellence. A "better" highway system than what we now have.


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We need the equivalent of a "man on the moon in this decade" program to build the biggest, fastest, most far reaching network conceivable to serve as the highway of tomorrow. It should be grandiose enough in scale and concept to awe the world with its power, reach, and utility to every American to the point that the most sought after economic boon throughout the rest of the planet is the privilege of connecting to this golden network of knowledge. I don't mean better than the Japanese. I mean better than the Japanese could have IM-

AGINED. It really should allow young school children access to all knowledge and publication collected over the past centuries in our Library of Congress, Smithsonian Institution, and other publicly held repositories of information. We need a leader with the veracity, credibility, and persuasiveness of a John F. Kennedy to launch it. And if we don't have such a leader, we need to create one. We need to rather grandly expand our vision of what connecting computers means. If we are to maintain our current standard of living, it must be so.

I'm most pleased to announce the birth of Marion Jack Rickard III on April 18, 1992 at 06:24 AM. His mother survived the introduction in marvelous spirits. I'm going to use what influence I may have with the young Mr. Rickard to persuade him to forego the joys of axle manufacture. It is my fondest wish that I have an alternative course of action to suggest. At whatever cost, at whatever effort, let us build a highway of the mind....

Jack Rickard
Editor Rotundus

## LETTERS

Dear Editor;

Get out of the Wesson, Jack! I could not help but blush at your girlish gushing in the May issue over the online hocus-pocus promised by H. Ross Perot and other secular political prophets, soothsayers of virtual-reality, and cyberpunk rabble rousers who promote the balm of "electronic democracy" and "more technology" as credible answers to this nation's political ills.

Make-believe solutions including online democracy, independent candidates, and term limitations becomes just so much more technological foreplay with the electoral process. In the absence of functional government, sound institutions and healthy communities, we are left with a cynical betrayal of the cry for responsibility and justice.

Does anyone seriously believe that democracy alone - either digital or analog - will somehow automatically produce human happiness? Hope for real change is possible, but only after detailed, fundamental and expansive argument has been carried forward in public debate from all corners (even electronic) with regard to issues ranging from religious freedom to economic development and international society.

Until then, the electronic community - even those not in debt to the gubbermint for their jobs and/or internet access - despite all the DOS shells, effete freedom fighters and good intentions, is just one more block of votes that has vicariously assumed the position, ready for violation by the power organizations that control the electoral process whose only purpose is to win elections.

Remember, V.I. Lenin once said:

"Do it now."

Bill Gram-Reefer
Sysop

*Dear Bill:*

*I'm going to guess I feel your professed cynicism doesn't even touch what is happening in this country. My feeling is that a large percentage of the population, inundated with news of society-wide drug abuse, schools that don't school, a loss of 3.5 million jobs among the Fortune 500 in 10 years, a national debt of more than $4 trillion growing by over $400 billion annually, a cynically corrupt Washington elite, and literally cities in flames nationwide, is no longer particularly interested in issues. At this point, the "position" or platform of conventional candidates such as Bill Clinton and George Bush won't even be heard for the nonsense they are. They are irrelevant. A good part of the populace feel the PROCESS has broken down - not because of the lack of solutions, but because of a growing distrust of the political machinery and individuals themselves.*

*This is a fundamentally different situation from any previously - at least in scale. Americans are feeling they don't HAVE a democracy, that they aren't part of the system, and that those who ARE don't have their interests at heart. They distrust the political machinery of America. This is a little grim.*

*The solutions you decry as non-workable are aimed at the process itself. A simple attack on the process is to elect someone outside of it. Ross Perot has much to recommend him as an "outsider" with the tools to implement change to the process itself. Perot's theme, and the theme of term limitations etc. is to remove power from the trusted elite that failed, and return it to the people directly. That's been an impossibility in the past, and may not work too well now. Proponents of electronic democracy hold that we now have the rudimentary technological tools to accomplish a more participative direct democracy. I agree this could be either bad or good - but it would be different.*

*And whether such solutions are for good or ill isn't really the point. The fundamental shift from dealing with problems to dealing with the solution mechanism itself is historic and in some sense frightening. And we do know from the 70 years of recent Russian history, that we can safely ignore whatever Lenin said as a possible solution.*

*I differ sharply with Perot on issues such as abortion and trade protectionism. But those differences are moot in the current situation. He's different, he's strong, he's been effective in his own field, and he advocates some constructive changes in the process - implemented in a peaceful democratic fashion. I find that superior to burning the place to the ground and starting over by pawing through the ruins for something to eat. Enough so to "gush girlishly."*

*Jack Rickard*

Dear Jack:

I pick up your magazine whenever I spot a copy at the newsstand. I enjoy reading about the BBS community. I have a small PCBoard 14.5 BBS in the cellar for support of my shareware. I have on 2400 line, 100 meg and 100 or so files. I average 3 calls a day (but I think it's the same guy).

Imagine my amazement when I turn to the Boardwatch national list, skim down to the 914 area codes and find my board listed right above Andy Keeve's fabulous Executive Network. I'm showing everyone I know the listing and I keep a copy in my wallet.

Now, I'm not complaining, but I feel a little out of place on this list. My BBS generates no direct revenues. It's a free board with no registration required. Its just a convenience for myself and my users. There are hundreds of people who are actually trying to make money using BBS's and all of them would kill their mother for a chance to be on your list. By BBS and Andy Keeve's Executive Network are just not in the same class. I spend more time on Executive than I do my own BBS by an order of magnitude.

You might be interested to know that since appearing in Boardwatch my BBS has increased in activity by about 33%. (The guy started calling four times a day.)

Regards;

Keith P. Graham

*Dear Keith:*

*Your modesty is touching - and characteristic. For those who don't know him, Mr. Graham has probably written over a hundred shareware utilities, in most languages, including a couple of programs that caught my eye and are available on his admittedly unassuming BBS. A startlingly quick little menu program (G-Menu?), a screen blanker called LAVA LAMP that is captivating, and some graphic utilities (Optiks?), and as I recall, a little program to convert text files into .COM programs that self display (TEXT2COM?) that have all been around for some time now.*

*Basically, if you're complaining that the Boardwatch Select List of National Bulletin Boards has virtually no structure, selection criteria, rationale, or reason, and takes eclectic to the ridiculous, I plead guilty on all counts. There are stodgy product support bulletin boards, government systems, sex chat lines, religious BBSs, political systems, shareware home systems, mega-BBSs, special topic systems, etc. scattered through it in a most haphazard fashion. They share one thing in common, I think they're interesting in some way or other and I want to be able to have the telephone number at hand to call them whenever I care to. It doesn't mean they are the best. It doesn't mean they are the biggest. They basically comprise a lone fat editor's dialing directory and some of the numbers, frankly, I don't recall precisely what it was that got them there. But I felt pretty strongly that they should be there when I put them on it.*

*I wish I could list EVERY deserving BBS in the world on that list. And if there were a way to do it, I would. But I can't. And there is no "fair" way to select systems for that particular list. If I came up with one, I would probably simply run it as a separate list because whatever rules anyone could come up with, would cause me to NOT list some system that I need or want to know the telephone number for. In fact, we've done so. The LIST OF LIST KEEPERS is a separate list of BBS that themselves maintain lists of BBS systems. The urge to list BBSs back to the days when there were only a dozen in operation. We also pick lists of different cities, different countries, or different topical lists to run in each issue of Boardwatch - this month a list of product support BBSs - some of which are in the regular list as well.*

*I confess some angst over the process. So we've put it off on the readers largely by sponsoring a Boardwatch Magazine Reader's Choice 100 BBS contest. This is a simple popularity contest. The system with the most votes is number 1, the second most votes is number 2, etc. Readers and callers from all over the country began sending in "ballots" the first of the year. We'll run this contest until July 1, and announce the winners at ONE BBSCON in August. So far, we have about 6,000 votes received and at the rate they're coming in, probably twice that number by the close of the contest. And it will result in yet ANOTHER list - the Boardwatch 100 which we'll publish at least once, and maybe make IT a standing list. The contest has been popular enough that we'll undoubtedly run it annually from now on. Next year, we may have some sort of judged contest as well if I can figure out how to do it.*

*You may think your BBS doesn't belong on the list. And if you compile and verify a list, please feel free to omit it on yours if you must. But this particular list is mine, and for now - you're on it. I'm going to guess that if I limited it to only the large money-making boards like Andy Keeves Executive Network - the list might be more statistically valid and we would probably be more profitably "magazine like" in many ways.*

*But something would also be lost in the remarkable diversity and variation that I personally find so engaging about the online world. Consider, if you will, that specifically that variety and the ability for someone to run a BBS with very limited resources and for very limited purposes MIGHT actually, in my mind, be the whole point of existence of electronic bulletin boards. In general, large systems tend to serve what they've got. Small systems tend to innovate to get it.*

*No matter how small or unimportant a BBS is in the overall scheme of things by any normal criteria of line count, disk size, or monthly income, if you accidentally do something interesting, creative, or usefully different with a single line system in the boonies on a 1200 bps modem that works about every third call - and I find out about it - unless you quickly disconnect your line and hide under the bed - you're mine. And I've got 30,000 readers hoping I'll catch you in the act.*

*Those interested in a simple to use, elegant, and startlingly fast little menu program titled G-Menus can pick it up from the author himself at (914)623-0039 at no charge at all (if the other caller has completed his four calls for the day). I'm guessing you can also find it on Andy Keeves Executive Network system - which is indeed a more impressive BBS system in all respects.*

*Keep innovating Keith. Leave the apologies to the elected officials who are profoundly better at making them.*

*Jack Rickard*

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Dear Jack:

Regarding Mr. Thompson's letter on the advertising of Gay Bulletin Boards in your magazine.

While it may be true that not all homosexual's are sick'o that hang out on street corners, not all Gay Bulletin Boards are safe for the public. Last month a Fresno California sysop was arrested for using his bulletin board to distribute adult material for the purpose of seducing minors. Last week he was charged with sexually assaulting a minor that he invited over to his house to teach him how to use his modem and on Friday he was charged with sodomizing another minor that he met through his bulletin board.

Now it's true that this maybe an isolated case, but we shouldn't take any chances. Advertisements like the ones for "The BackRoom" and "Lifestyle BBS" in your magazine gives them a sort of creditably, at your expense. I'm sure you wouldn't allow advertising for a board that offered "Pirated Software" or any other illegal activity. Now maybe these two systems are not engaging in illegal activity, but there is no guarantee that children aren't connecting with these systems. Even the 976 dial up numbers can't guarantee that minors aren't accessing their recordings.

You have a fine magazine, it shouldn't associate itself with actives that promote activities that could hurt innocent children.

Jack W. Porter Jr.
Zen DEn Systems BBS
1:10/47

*Mr. Porter:*

*Again, a profound display of confused thinking. You've lumped a BBS in Fresno with two in New York, 976 numbers, and pedophilia all in a couple of sentences. I have a hard time sorting these type of letters out but let's give her a go.*

*First, you've rather generously misunderstood what happened in Fresno. Since I have had a little difficultly getting coherent statements from the police department that started - and then backed off - of this story, I'm just going to claim I'm not sure what happened, I don't think they are either, and I'm dead certain you aren't. But it doesn't particularly detract from your point - such things HAVE apparently happened, most recently in Massachusetts, so lets assume for the moment that there HAS been at least one case of sexual abuse of a minor, that in some way, some how was connected to a bulletin board.*

*Now what has THAT got to do with Lifestyles BBS or The Back Room? To my knowledge, neither system has been involved in any illegal activity at all and you've not begun to make a case that they have. The system in Massachusetts wasn't a gay BBS at all - it was a restaurant database and chat line with no sex component whatsoever. It is the only verified case I know of resulting in an arrest and subsequent charges for the sexual abuse of a minor. You yourself state that the case you've so misquoted may be isolated and that it doesn't imply that all gay or sexually oriented bulletin boards are at all involved in such activities. So what are you advocating? Let's assume that sooner or later some gay BBS IS charged with sex crimes. Should we then assume that all GAY BBS are involved and should be censured? What if we find a shareware library system with pirated copies of Novell Netware on it? Ban shareware library systems? And what if a Fidonet BBS operator is caught breaking the law - should Boardwatch ban FidoNet systems?*

*In the case of both Lifestyles BBS and The Back Room, I happen to know, not that I need to, but I do happen to know that both have a very proactive program to require written proof of the age of majority for anyone accessing their system - a situation so completely lacking in analogy to 976 numbers that I can't quite respond to the connection you've misdrawn. It's not "even the 976 dial up numbers can't..", rather, it is exceedingly difficult for 976 voice numbers to verify age and rather easier for bulletin boards to do so. I would note that not all BBSs do verify age, but the trend in adult BBS is to do so.*

*Wrong is wrong. But you're asking me to classify whole groups of bulletin boards as persona non grata based on rumors of incidents, hypotheticals, and your general feeling that there must be a connection here - a connection for which you haven't even begun to make a case. If we truly shouldn't "take any chances", why don't we just outlaw bulletin boards - starting with yours? You suggest gay BBS are the problem and draw no distinction between gay BBS that do and those that don't. To the rest of the world, a BBS is a BBS and they can just as conveniently, and just as rightly, classify YOU as one of the "BBS people" that are ostensibly part of this criminal activity. Let me put this in perspective:*

*1. There were two houses in our neighborhood that burned to the ground.*
*2. Both were mostly painted green.*
*3. Owners of green houses should pay a larger fire insurance premium to keep the rest of us blue house people from subsidizing their insurance. Clearly, green houses are more prone to fire.*
*4. True, this MIGHT be unfair to green house owners, but thousands of children die in fires each year - let's not take any chances.*

*It's not just that you've used painfully flawed logic, you've fallen into the "let's trade freedom for safety" trap that just drives me up a wall. It goes like this: "If it saves just ONE child from sexual abuse, it's worth shutting down all 44000 BBS in the United States." This point APPEARS to have merit and can be used to forfeit ALL freedoms - one at a time, in the name of saving JUST ONE CHILD. The problem is, planet earth is NOT a safe place to live - even for children. No one gets out alive. And the paradox is that the places with the LEAST personal freedom and individual liberty, forfeited in the name of safety and the public good, are almost always the LEAST safe to live in.*

*If you have hard evidence that a BBS listed in Boardwatch promotes activities that hurt innocent children, by all means let me know. If you want to ban groups by virtue of guilt by association, be certain YOU'RE not one of a slightly larger group that could be caught in the same trap.*

*Jack Rickard*

Dear Jack:

The letter from Bob Thompsons in April's Boardwatch and your defense (of the Lifestyle BBS with its graphic of a shackled woman) has probably drawn more comment than you need. You probably now realize that you were a tad insensitive with your views.

An obvious rejoinder would be, what if that was a child there trussed up? Are we still talking freedom of anything? Freedom to fear for your health and freedom, maybe?

The bottom line is this. Decent men are the guardians of women in all human societies, just as we are the guardians of children. And as justice must be seen to be done, so then is it true that we cannot gratuitously portray the abuse of our charges when they are inherently defenceless against men. Injustice must first be unseen so as not to suggest to baser men that there is legitimate arena for their bent lovelines. To think that they will confine their lust to their modems, as suggested, is not realistic.

There are too many people in this world who are top heavy with brains and bereft of common sense. I doubt that you are among them, so say it ain't so.

Respectfully,

Dwight Jones
Cardz Computers
1-604-734-5800 BBS

*Dwight:*

*I fear it may be so. In fact, there is a LOT about this area I'm a bit short on experience in dealing with, and I do pride myself on my insensitivity. It's not just that I'm not Politically Correct, I'm politically a blatant failure and somewhat taken with the achievement. You are quite right, it DID draw more comment than I needed, but I'm afraid not in the preponderance or direction you suggest. We received TWO additional letters calling me to task on this, yours and the other printed above. I also received a call by telephone from a feminist in San Francisco who noted she was unalterably opposed to my position, though she couldn't say for sure why. We also received about 60 electronic mail messages. I hesitate to say they were in support of my position, though that was clearly the intent. But the story is interesting.*

*Mr. Thompson originally sent his letter to me by private electronic mail - as well as a printed letter by mail. I responded privately by electronic mail. He posted both his original letter and my reply in a Usenet Newsgroup on the Internet titled ALT.BBS in an effort to show me up publicly as the schmuck I undoubtedly am.*

*I won't comment on the faux pas committed here in copying a private message to a public conference. But the response in ALT.BBS was NOT what Mr. Thompson was seeking. The overwhelming response was opposed to his view, and someone in ALT.BBS copied both messages to a Usenet News Group devoted to S&M. This is short for sadism/masochism and apparently most of the readers of that news group revel in that sort of thing - many of them women apparently. In any event, they went on an electronic rampage.*

*The net result, in addition to the electronic message storms in S&M and ALT.BBS, was about 60 laudatory personal electronic mail letters from women "fans" among this group and probably 30 subscriptions to Boardwatch sight unseen. As I noted in my original response, I'm a bit naive about such things and don't share the cause celebre myself. But suffice it to say, I got an education from some pretty incensed women who were not lightly enraged at Mr. Thompson's presumption in protecting them from their favorite sport. It would appear the general theory involves "loving trust" and a "transfer of power" if I understand it correctly. If it's a ballot by message count you're seeking - you lose.*

*That said, yours was the first letter I've received constructed sufficiently in English and rationally addressing the subject to give me pause for thought. The "child" replacement suffers from the obvious problem that it wasn't a child shown, and in fact hardly a definitive description of a woman. We are, after all, talking about a postage stamp sized line drawing of two high heeled shoes and a pair of handcuffs touting a chat service. But I did like your portrayal of decent men as guardians of women and children in all human societies. It's a quaint and old fashioned concept, and I like the quaint, the old fashioned, and the concept. And the thought of "suggesting to baser men a legitimate arena for their bent lovelines" does indeed disturb me.*

*So let's assume that I agree. In the past we've assumed an editorially neutral view of subject matter in our stories and addressed only the technical and presentation elements of BBSs, along with a bit of motive and history behind the systems. On advertising, I generally don't even discuss it much less editorially judge ads. Is it then appropriate for me to take what amounts to the only publication seriously serving the online community, and dictatorially decree what can be advertised and what not? Acting as sole judge and venue for what our readers are permitted to see, and what not, based on my own dubious qualifications as arbiter of such things?*

*I've sought to avoid responsibility for this because of the endless hair splitting it entails. Would the ad be ok without the handcuffs? With one handcuff? With tennis shoes instead of high heels? Rotated 180 degrees so it doesn't imply the "hanging" part? Simply don't accept ads from sex chat BBSs? Or chat BBSs? Or BBSs? How about sexually explicit graphics? How about hardware or software used to compress and depict sexually explicit graphics?*

*You are suggesting I assume a task I can never successfully complete. And there remains the haunting question of whether it should rightly be attempted at all. Let me give it some further thought. Your letter was most persuasive.*

*Jack Rickard*

Dear Mr. Rickard,

I am an attorney, and provide counsel to the leading non-commercial distributor of public domain machine readable texts. The texts are principally distributed via Internet FTP sites.

In Lance Rose's recent column "CD-Roms for Bulletin Boards", Lance writes:

# The Village Group announces a whole new concept for you, the sysop:

## Get paid for your hard work.

If you're a BBS System Operator, you know that providing valuable on-line services takes more than a phone line and a hard disk. Besides the capital expense, it requires time, dedication and energy.

It's easy to get appreciation. Getting paid is another matter. Even if you have a workable billing policy in place, administering it can take more resources than you have available.

**If you're going to run a business, give yourself business resources.**

An interactive media business is like other media businesses. Look at others in your area. Magazines and radio stations, even the smaller ones, have marketing, billing and accounting staffs that make it possible to reward their owners for their risk and effort. But those resources haven't been available to sysops, both because they're expensive and because providers of business resources often don't understand interactive media.

The Village Group wants to provide what you need to make money from your business. We want to work with you to ensure that your board becomes a vital mainstream local media outlet, just like a magazine or radio station.

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"The main limit on CD-ROM copyright protection...is simply that much of the information on CD-ROMs is not copyrighted. For example, a CD-ROM containing all of the works of Shakespeare will not have a copyright on Shakespear's writings - any conceivable copyright on them expired long ago. If the company distributing the CD-ROM adds its own commentary, however, this is probably protected by copyright."

Unfortunately, this statement is untrue as to both print and CD-ROM works. It consequently endangers Sysops who, in reliance on it, post CD-ROMs of Shakespeare or other ancient works on their BBSes.

Publishers of public domain works nearly universally subtly alter them to create a claim to a copyright in them. Sometimes this takes the form of publishing "critical editions" that purport to be a product of considerable editorial discretion in version selection and in fragment arrangement. Sometimes this takes the form of many tiny line by line text changes in spelling, word choice, and sentence sequence.

Whether these comparatively trivial changes justify a copyright in a public domain work is interesting to attorneys, but not to Sysops. As a practical matter, many commercial publishers of public domain works - West Publishing and the Oxford Text Archive among them - claim copyrights in them and very aggressively protect those claims. The publisher of public domain works that I counsel makes frequent use of its separate copyright counsel to identify versions of books in which no copyright can be claimed so it can safely copy and distribute them. Her work is time consuming, and not easy.

These points apply with particular force to Shakespeare, who did not leave definitive editions of any of his works. The CD-ROM based version of Shakespeare that was distributed with the original NeXT computer was, for example, a version that its publisher claims is copyright protected. The claim may well be valid because it is in style unlike many other versions of Shakespeare. But, sadly, these points apply with nearly equal force to more traditional versions of Shakespeare, and to all other public domain works.

Sysops should know.

Sincerely yours,

Charles B. Kramer.

*The author, Lance Rose, responds:*

*Chuck Kramer's myopic letter is a good example of why some people avoid lawyers at all costs. He neither gains a pound of flesh nor spills a drop of blood, though he can spew a good dense fog of hot air.*

*Let's get back to the basics for a moment. Copyright law under the Constitution is a trade-off. Authors can control the use of their works for a limited time, but in exchange, those works ultimately enter the public domain. The stated purpose of the copyright law is to encourage authors to create valuable works by promising them a monopoly. But when the monopoly's over, everyone can use those works however they want.*

*Chuck would have readers of this magazine believe otherwise. According to Chuck, scholars and researchers trying to piece together the real Shakespearian texts have somehow removed those works from the public domain. This would put the lie to both the Constitution and to the copyright laws in this country, and it's wrong.*

*If any large companies like the ones Chuck mentions are seeking to enforce "copyrights" in Shakespeare's own writings, this would not be the first time someone tried to claim he was the owner of something that did not belong to him. I guess Chuck's theory is that big bad bullies who grunt loudly enough are right. Yet somehow, I can't see anyone claiming copyright to Shakespeare's own writings with a straight face.*

*Even Chuck is right about one thing: other materials included on a CD-ROM with Shakespeare's works might be copyrightable. Didn't need his letter for that, though. I said it myself in the quote he claims to disagree with.*

*One might wonder why Chuck bothered with his letter, even if he had been lucky enough to be right. Anyone who read my CD-ROM column a couple of months back would know I didn't exactly advise people to throw caution to the wind, and blithely put any and all CD-ROMs up on BBSs for fun and profit. To the contrary, the point of the article was that CD-ROM rights are often restrictive, and even when you can distribute CD-ROM information, the effort of separating the public domain material from the copyrighted material on the CD-ROM could cost more than simply buying a license for online distribution rights.*

*A special note to anyone touched by Chuck's professed concern for sysops. At about the same time he wrote the very letter above, Chuck was threatening to sue a group he believed to be in control of a public message area on one of the national BBS services. The reason? He said the group was liable for permitting callers to post messages he claimed were damaging to him.*

*Sysops should know: watch out if Chuck calls YOUR BBS.*

*Regards;*

*Lance Rose*

Jack!

I have subscribed to many magazines in the past 10 years, but yours is the only one I have renewed! Keep up the great editorials and subjective writing style; it's the most refreshing publication I have seen since National Lampoon.

If you're feeling brave, call my chatline, the Bee Line, operating on handmade software, 17 ports, in its 6th year, over half a million calls, no files, no messages, originally ran 12 ports on an Apple II+ computer! I'll set up an account for you. If you see a guy named BEE on, that's me!

Sincerely;

Bee

*Bee:*

*I'm reminded of an old joke that goes something like this, one fellow remarks to another that he read that 40% of all*

adult females are actively seeking new *sexual relationships. His friend replied, "40% - hell, I want NAMES."*

*I'm feeling brave BEE. I'd love to dial in and see a 17-line chat system on handmade software that has been up for six years. But I need numbers. Ideally, telephone numbers.*

*Hang in there.*

*Jack Rickard*

# TELE-BITS

## TRIVIA, RUMORS, NUMBERS CAUGHT IN PASSING

Data Storm Technologies is rumored to be working on a KILLER version of their popular communications program - **Procomm** - for Windows 3.1. The new version supposedly features mouse-everything in some interesting new on-line ways. Look for a fall introduction.

A company titled NuTek in Cupertino California is reportedly about to launch a three-chip set with operating system software to essentially clone the Macintosh. The system uses the MOTIF GUI interface - different from the Macintosh, but will reportedly run any Macintosh software program and on prototype motherboards, apparently run any Macintosh NuBus card.

Colorado is about to introduce a statewide network for education titled **ACCESS COLORADO**. The service will provide an **800** number that anyone can dial from anywhere in the state to access the Colorado Alliance of Research Libraries, one of the premier on-line library services in the world, and Colorado SuperNet, a regional host for Internet services. So anyone with a modem in Colorado will be able to access bibliographic data on over 5 million books and articles, or connect to Supernet and access their Internet account - at no connect fee. The design purports to allow educational institutions statewide greater access from both school and home to educational services. Apple Computer has been in state donating Macintosh equipment to the project.

Apple is rumored to be planning the introduction of a hand held pen-based computer. Code named **NEWTON**, the device would weigh a pound, measure **6X8** inches, recognize handwriting, include a calendar, an address book, and allow users to send and receive electronic mail. Best of all, price is said to be less than **$1000**. Also rumored is Apple's intention to license the technology to Sharp and others in an attempt to make Newton quickly ubiquitous.

It's all true that a congressman ought to be able to balance a checkbook. And many Americans seem quite convinced this is the year to "throw the rascals out" ostensibly because they bounced a few checks. Well, it probably wouldn't hurt to start all over with a new crew, but bounced checks may not be the perfect reason. The American Collectors Association, Inc., estimates that Americans, many who WEREN'T congressmen, bounced **482 MILLION** checks in 1990 - some **$14 billion** dollars worth.

Digital Equipment Corporation, once one of the most profitable computer companies in the world with their popular VAX line, is suffering a bit these days. They posted a 3rd quarter loss of **$294.1 million** on sales of **$3.25 billion** for the period ending March 28. The company had earned **$116.5 million** on **$3.52 billion** in sales for the same period a year earlier. They've reduced their work force by some **20,000** to the current **106,000** during that period.

AT&T is introducing a new **700** number service titled **EasyReach 700**. The service costs **$7** monthly, **25** cents per minute daytime, and **15** cents per minute at night. It allows you to forward your calls to a 700 number which will ring wherever you are. It's designed for those who still want to take calls while on vacation. You can give friends a 4-digit access code and they can reach you at no charge - you pay for the connect time - somewhat after the fashion of an 800 number.

Where did the symbol for the U.S. dollar, the dollar sign ($) originate? **Oliver Pollock**, a New Orleans businessman is credited with creating it on **April 1, 1778.**

**VIRUS ALERT.** Several new strains of computer virus have been reported, including:

**Jerry Brown Virus:** Blanks screen and flashes 800 number.

**George Bush Virus:** Benign - doesn't do anything, but you can't get rid of it till November.

**Bill Clinton Virus:** Mutates from region to region - not exactly sure what it does. Seems to monitor system but claims not to inhale.

**Ted Kennedy Virus:** Crashes computer, but denies it ever happened.

**Warren Commission Virus:** Locks up your files for approximately 75 years.

**Congressional Virus:** Overdraws disk space.

**Richard Nixon Virus:** You can wipe it out, but it keeps coming back.

**Dan Quayle Virus:** All application programs locked out except PGA TOUR.

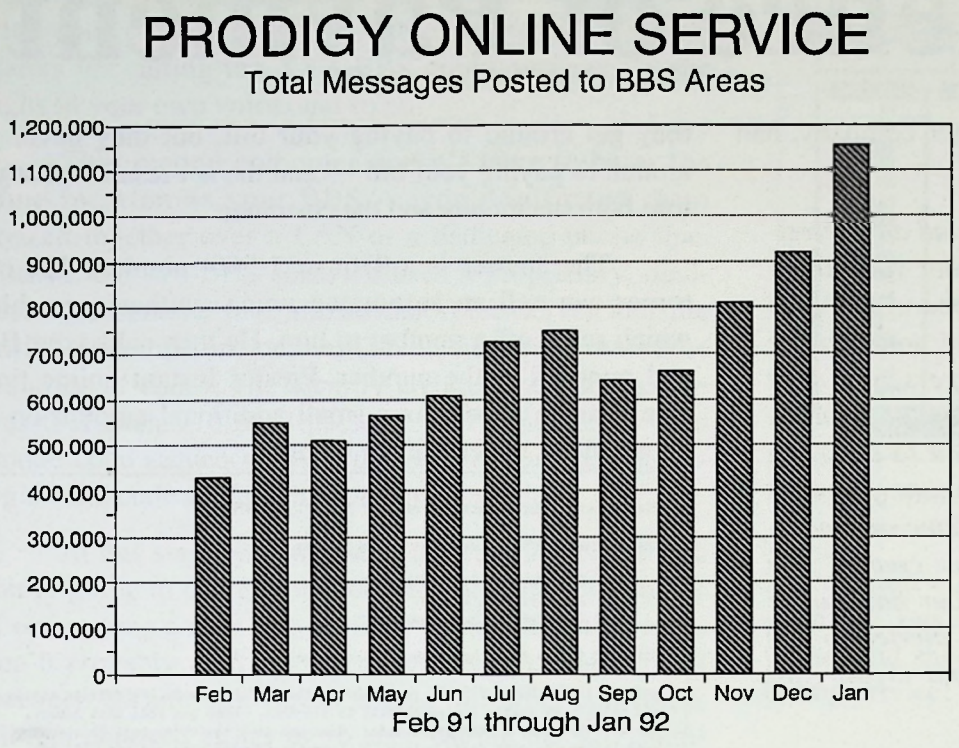
**Ross Perot Virus:** Not sure what it does, but it does it very fast, sounds good, and is always highest priority.

**Pat Buchanan Virus:** Shifts all output to right side of screen.

## PRODIGY NUMBERS

Prodigy Services Company has been gleefully reporting the total number of users at **1.6 million.** Many online watchers have noted that this number is not particularly meaningful since the company counts multiple user accounts per household - household accounts estimated at something over **800,000.**

Recently, the service has clearly been enjoying some success. They now report they are receiving more than **600,000** logons daily and according to Bruce Thurlby, Manager Editorial Business Operations, the service went over




a million BBS messages per month in January, 1992, with approximately **1,150,000** postings.

Prodigy is cutting some new ground with their sign-up kit as well. They recently began offering a Prodigy sign-up kit WITH a 2400 bps modem at a list price of **$49.95.** Several retail outlets have been discounting this to as low as **$39.95** - the lowest price we've recorded for a 2400 bps modem - never mind Prodigy. We just can't find fault with a group bringing this many new faces online - giving them a modem - and all for the price of dinner for two.

In this election year, their political areas have been doing particularly well. A simulated election game has been getting rave reviews and some of the political survey functions provide fascinating statistical data on whose thinking what online.

The graphic functions of Prodigy are pretty and usable, but suffer badly at the hands of a 2400 bps connect. The company appears to be awakening to the fact that graphics requires speed. They are experimenting with 9600 bps connections and are doing a pretty effective job of buttonholing RBOC on the topic of reasonably priced Integrated Services Digital Network (ISDN) offerings. The 64 kbps speed of ISDN would easily make their NAPLPS graphic screens glow in the dark for callers.

They're also a bit more interested in the rest of the online world. Rumors persist that the company is at least looking at an Internet connection for mail - no promises. And according to Thurlby, they'll be out in force at the ONE BBSCON gathering of BBS operators in Denver this August. Prodigy Services Co., 445 Hamilton Ave., White Plains, NY 10601; **(914)993-8892.**

## COMPUCOM CORP. BITES THE DUST.

CompuCom, a San Rafael California modem manufacturer became history as of April 27, 1992. According to some employees, they went to work Friday, April 24 to business as usual. But Monday morning, the doors were closed, and all office furnishings had been removed. They received no notice of the pending closure.

CompuCom had launched in 1990 with the laudable goal of showing the world that they could bring low cost high speed modems to the masses. In the process, they did have a decided impact on modem prices far beyond the estimated 20,000 units they sold would seem to imply. With the January 1991 introduction of the Speedmodem, a proprietary 9600 bps modem with fax, voice mail, and MNP for **$169,** the company accelerated the price collapse of the more useful 9600 bps V.32 modems used throughout the rest of the industry. But in the process, CompuCom apparently drilled itself into the ground.

According to Marc Teitler, a small contractor providing product support for the modem line, the companies troubles began with the very slim margins on their modem line. And they had been experiencing some difficulties with their V.32bis STAR model. But the death of Production Manager Robert Wells was probably the final straw. Wells had moved to California to join the company and was expected to infuse new funds into the operation as well. Ten days ago he died suddenly of a heart attack brought on by a case of the flu - stunning the company and founder James Freeman. According to Teitler, Freeman called a week later and said he was folding the company and leaving the state.

Apparently, CompuCom left a number of creditors in the lurch as well. Teitler himself was owed a substantial sum for the product support services he provided. He has some information on ROM upgrades etc. that were pending, and professes a desire to help those with modems needing the upgrade, but no real idea how to provide it giving the lack of resources available. Apparently, nearly 30 CompuCom users had just sent back modems for repair as well, and no one knows precisely what the status of those modems is.

Largely due to the low price of the modems, the line had actually developed something of a following in the BBS community and despite some minor operational glitches, were increasingly well received. Teitler remains about the only hope for product support, despite having little resource or obligation to provide it. They continue to answer questions in the support echoes and CompuCom users can obtain what information was available about the demise from his system in San Diego, THE GENERAL, at **(619)281-2622.** Marc Teitler, POB 50047, San Diego, CA 92105.

# Convenience of Payment

What if McDonald's, the hamburger company, had tried to get started this way:

*You're out cruising in your '57 Chevy, and an interesting looking new hamburger stand catches your attention. You drive up, and a waitress appears. She asks for your name and password. You have none, so she explains that, in order to buy hamburgers, you must register in advance, and make a minimum payment by credit card or mail. This will entitle you to a certain number of hamburgers per week. Each time you want a hamburger, you simply give your name and password, and the appropriate "hamburger credits" are deducted from your account. When your hamburger account starts to run low, you will be alerted to buy more, or, you can arrange to have your credit card automatically billed.*

Would you have bought a single hamburger this way? Would anybody? Yet that is exactly what the online world has asked its customers to do... until now.

## Breakthrough Billing Service = BBS

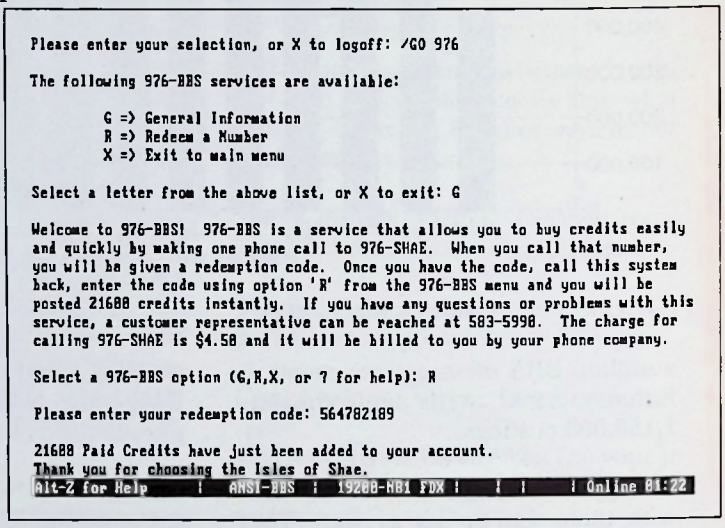
The convenience of cash is taken for granted in everyday business transactions. You want a Coke — you drop a coin in a machine. You go to a movie — you fork over the cash, they hand you a ticket.

Online services can't work that way, because the customer is not physically present at the place of business. It's not that he doesn't want to fork over the cash, or that he considers it too expensive. It's just that the logistics of getting the cash out of his pocket and into yours are too awkward. Credit cards are no good for several reasons:

- Many people may be reluctant to give you their credit card number for fear of hackers
- Many teenagers who use BBS's don't have credit cards
- Banks are highly distrustful of credit-card-over-the-phone types of businesses, which makes it hard to become a "merchant"
- The low dollar amounts per sale make the overhead of filling out slips or phoning for validation a large fraction of revenue

Billing your customers doesn't work either. Many of them will put off paying your bill — but they will feel guilty about it, so they'll put off calling your system until they get around to paying your bill, but they never get around to paying your bill — and the net result is that you lose both the money and the customer.

The answer is a 976- or 1-900- number. The customer can call an automated voice synthesis machine, which reads off a number to him. He then calls your BBS and punches in the number. Presto! Instant online time! The charges appear as a small additional amount on his phone bill at the end of the month.




*Once a user has called your 976- number, he can dial back into your BBS and redeem his code. On the Isles of Shae, where this software was tested, 976-SHAE became the preferred method of payment almost immediately.*

People always pay their phone bills — or they don't have phones. You get paid directly by the phone company, so you don't have the hassle of filling out long deposit slips or chasing down bad checks. And your customers can buy online time from you "on impulse", with no inconvenience or delay. Your own time is freed up, since you don't have to get involved in the day-to-day posting of credits and management of accounts. And best of all, new prospects can give your system a try — as full-fledged paying customers — on their very first call.

## Here's How It Works

You'll need a second computer, a 976- or 1-900-number, and the Galacticomm 976-BBS™ package. (We assume you are running The Major BBS® with full source code licenses or you wouldn't be in this business.)

You take the online "module" part of the 976-BBS software and add it to your MAKETSYS file. You install the Talking Technologies Powerline II card (which comes included in our 976-BBS package) in the second comput-

er, along with our voice-configuration software. You use any ordinary telephone handset to "program" the system with your particular header/trailer messages ("Hello, thanks for calling the XYZ BBS credit service..."), the digits in your own voice, and so on.

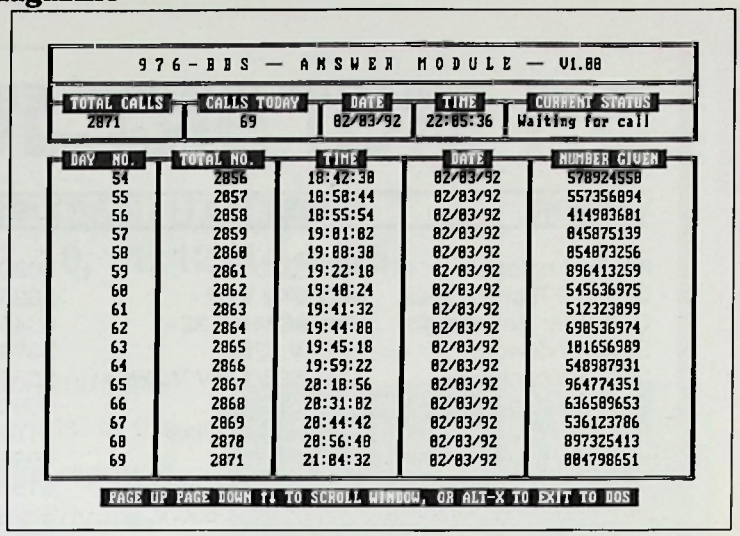
This second computer doesn't have to be at the same location as your BBS — you don't need them hooked together over a LAN or a dedicated phone line. Instead, the 976-BBS software uses a proprietary, dual-password scheme that allows the voice-server and the online redemption mechanism to generate the same sequence of codes. The security architecture also guarantees that each 976-BBS package will generate its own unique code sequences. And the odds of someone guessing a valid code are less than one in ten million.

At this stage, you will need to determine how much you're going to charge for each call and how many hours of online time a user will get for a valid redemption code. You'll probably want to keep the charge reasonably small (between $4 and $8). If you charge too little, your users will get annoyed at having to keep calling the 976- number to get more credits every hour (also, if your phone company gets a certain minimum amount per call, this will cut into your profit margin). If you charge too much, however, people with think twice before picking up the phone.

You should check your local tariffs to make sure your messages contain any necessary disclaimers (e.g., "each call will cost such-and-such plus toll, if any", "if you're under 18 you must get the permission of a parent").

Next, you configure the online module. What's the 976- number users should call? What voice phone number should they call if there's a problem? How much will they be charged for each call? How many credits will they get? You can also configure the number of attempts a user can make to redeem an invalid code before being automatically logged off. Anytime a user is logged off for trying to redeem a false code, a message is generated in the Audit Trail, alerting the Sysop.

Now, plug your 976- line into the back of the Powerline II card and fire up the voice-server software. You'll be able to see calls as they come in, and you can use the arrow keys to scroll through a history of all




*The 976-BBS server software uses a voice synthesis card to present callers with their redemption codes.*

redemption codes given out, each one time and date stamped. Last step: activate your Online Redemption Center and announce to the world your new breakthrough billing service!

## Just a Phone Call Away...

Imagine how much easier it will be for a first-time caller to join your BBS:

*It's 10 PM. You decide to call a new BBS you've just heard about. You log on and are told that this is a pay-for-play system, but you are invited to try a free demo. You enter the teleconference, and WOW! There's a small group playing poker, a heated debate over the last Superbowl, people hugging each other. Someone whispers a private hello to you, and you get involved in a discussion with someone you knew in school. Suddenly, you get a message that your free demo time is up, but you can call a 976- number to buy another 4 hours of time for $5. You quickly pick up the phone and give it a call. Two minutes later, you've logged back on, redeemed your code, and returned to your conversation. What a cool system!*

Give us a call at 305-583-5990. Soon you can concentrate all your efforts on making your BBS the best it can be. And once a month, deposit those checks from the phone company.

GALACTICOMM

Galacticomm, Inc. 4101 S.W. 47 Ave.
Suite 101, Fort Lauderdale, FL 33314

Modem: (305) 583-7808
Fax: (305) 583-7846
Voice: (305) 583-5990

## BULLETIN BOARD OPERATOR DISCOUNT PROGRAMS
## V.32 and V.32bis Modems

| VENDOR | MODEL | LIST | SYSOP | BBS | VOICE | FAX |
|---|---|---|---|---|---|---|
| ATI Technologies | ATI V.32 | $699 | $350 | 416-756-4591 | 416-756-0718 | None |
| Cardinal Technologies | 9600V42 V.32 | $699 | $269 | 717-293-3074 | 717-293-3000 | None |
| Computer Peripherals | Viva 9624e V.32 | $349 | $249 | 805-499-9646 | 805-499-5751 | 805-498-8306 |
| Galaxy Networks | UFO V.32bis | $999 | $299 | None | 818-998-7851 | 818-998-1758 |
| GVC Technologies | FM-9696/144V V.32bis | $689 | $413 | 201-579-2380 | 201-579-3630 | 201-579-2702 |
| GVC Technologies | SM-96V V.32 | $599 | $329 | 201-579-2380 | 201-579-3630 | 201-579-2702 |
| Hayes Microcomputer | Ultra 144 V.32bis | $1199 | $599 | 404-446-6336 | 404-840-9200 | 404-449-0087 |
| Hayes Microcomputer | Ultra 96 V.32 | $999 | $399 | 404-446-6336 | 404-840-9200 | 404-449-0087 |
| Hayes Microcomputer | ISDN System Adapter | $1599 | $799 | 404-446-6336 | 404-840-9200 | 404-449-0087 |
| Image Communications | Twincomm 9600 V.32 | $299 | $279 | None | 201-935-8880 | 201-935-6548 |
| Intel Corporation | 14.4EX V.32bis | $699 | $399 | 503-645-6275 | 503-629-7000 | 503-228-9707 |
| Intel Corporation | 9600EX V.32 | $599 | $299 | 503-645-6275 | 503-629-7000 | 503-228-9707 |
| Multi-Tech Systems | MT932BA V.32 | $869 | $435 | 612-785-9875 | 612-785-3500 | 612-785-987 |
| Multi-Tech Systems | MT1432BA V.32bis | $899 | $450 | 612-785-9875 | 612-785-3500 | 612-785-9874 |
| Practical Peripherals | PM14400FXSA V.32bis | $549 | $250 | 818-706-2467 | 818-706-0333 | 818-706-2474 |
| Supra Corporation | SupraFAX V.32bis | $399 | $249 | 503-967-2444 | 503-967-2400 | 503-967-2401 |
| Supra Corporation | SupraFAX V.32 | $299 | $199 | 503-967-2444 | 503-967-2400 | 503-967-2401 |
| Telebit Corporation | T3000 V.32bis | $949 | $399 | None | 408-734-4333 | 408-734-3333 |
| U.S. Robotics | HST/DS V.32bis | $1295 | $499 | 708-982-5092 | 708-982-5010 | None |
| Ven-Tel | EC96 V.32 | $699 | $439 | 408-922-0988 | 408-436-7400 | 408-436-7451 |
| ZyXEL | U-1496E V.32bis | $695 | $370 | 714-693-0762 | 714-693-0804 | 714-693-0705 |

## AT&T ANNOUNCES CODEC CHIPSET

AT&T Microelectronics has unveiled a 3-chip set titled the **AVP-1000** the company claims will implement all necessary functions for full-motion video, video conferencing, and stored video. The chipset is intended to drive down the cost of video codec equipment used to transmit video images by telephone. According to Arnold Englander, manager of market development, the concept is to reduce the current codec box to a handful of chips that could be incorporated into a PC, and it should reduce the cost of current codec equipment to one-tenth of the current **$20,000-$40,000** level.

The new chipset consists of an encoder, a decoder, and a system control chip. It supports **MPEG** (**M**otion **P**icture **E**xperts **G**roup) standard for full motion video, the **JPEG** (**J**oint **P**hotographic **E**xperts **G**roup) standard for still images, and the **Px64** standards for videoconferencing. It supports video transmission of up to 30 frames per second. The AVP-1000 chipset will be available in quantity in early 1993 at **$376** per. For more information, contact AT&T Microelectronics Marketing Communications, Department 520404200, 555 Union Boulevard, Allentown, PA 18103; **(800)372-2447**.

## CHEAP RS-232 SERIAL PORT CARD

The price of 9600 bps V.32 and 14,400 bps V.32bis modems is in approximate free-fall at this point. This is good news for everyone online. By this summer, we expect to see V.32 modems discounted to less than **$200** and by the end of the year, we would project that the majority of online aficionados will have made the move to the higher speeds. The move from 1200 to 2400 bps occurred almost overnight once the price was right - effectively doubling the speed of the online world. The difference between 2400 bps and 9600 bps is a factor of **400%** - not just double and we think the lunge to the higher speed will happen even faster this time - despite the fact that there is an order of magnitude greater number of people online this time around.

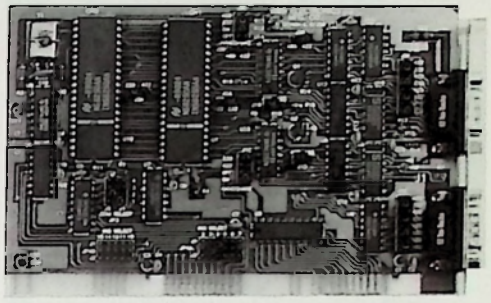
One little problem arises for many upgrading their modem speeds. Older computers with the older serial ports can't handle the pace of the higher speed modems. The culprit is the 8250 **U**niversal **A**synchronous **R**eceiver/**T**ransmitter (**UART**) chip originally used in the IBM PC. Even PCs used today commonly use a **16450 UART**. The 16450 generally CAN handle the speed - if that's all you're doing. But with multitaskers such as DESQview, Windows, OS/2, etc., it also has trouble handling serial port communications at these high data rates. Normally, the failure isn't catastrophic - the modem still works. It's just that the effective throughput is hobbled by the serial port. To get the maximum throughput from that high speed modem, you need to make sure your PC isn't the one slowing down the game.

The answer commonly quoted online is the **National Semiconductor 16550 UART** Chip - Model **NS16550AFN.** This chip has a 16-byte first-in-first-out (FIFO) buffer in it that allows the CPU a little slack in servicing the serial port. Replacing chips is a bit more technical than most online callers like to get. Worse, National Semiconductor has announced they are discontinuing the chip. R&S Data Systems in Longwood Florida is currently selling a card with two serial ports, a printer port, and a game port on it for **$37.95** plus shipping. This card is already loaded with two

# Serial Cards For The IBM PC

**Available with 8250 or 16550 UARTS**
**Can use IRQ2, 3, 4, 5, 6, 7, 10, 11, 12, 14 or 15**

The Model 232 CICC Interface Card is an Asynchrous Communication Card which provides RS-232, RS-422, or RS-485 signals. In the RS-485 mode, the card can operate in two wire or four wire mode with RTS used to control the high impendance state of the drivers. The receiver can always be enabled, or controlled by RTS. This card is available with 16550A UARTS. The 16550A uses a FIFO to buffer 16 bytes of data to permit less CPU overhead time while handling communications. Note that your software must be 16550A compatible. Both ports use a DB-9 male connector which looks like a standard AT port in the RS-232 mode.

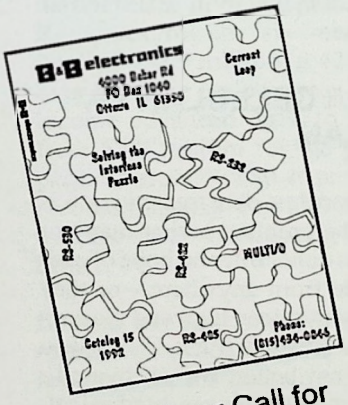


**These models are available at reasonable prices:**

| | | |
|---|---|---|
| **Model 232CICC1** | **One Channel Unit (8250A UART)** | **$104.95** |
| **Model 232CICC1A** | **One Channel Unit (16550A UART)** | **$119.95** |
| **Model 232CICC2** | **Two Channel Unit (8250A UART)** | **$129.95** |
| **Model 232CICC2A** | **Two Channel Unit (16550A UART)** | **$159.95** |

## features

- Provides complete RS-232 or RS-485 or RS-422 interface on each port
- Uses RS-485 drivers for 32 points on a multidrop line
- Fits PC, XT, and AT computers
- Permits use of most interrupts (IRQ2-7, 10-12, 14, and 15)
- RS-232 supports all PC port lines: TD, RD, RTS, CTS, DSR, CD, DTR, and RI
- RS-422 and RS-485 supports TD and RD lines
- Available with FIFO UARTS (16550)

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**NS16550AFN** UART chips - one for each serial port. They seem to have an adequate stock of the chips - for now. R&S Data Systems, Inc., 820 East Highway 434, Suite 160, Longwood, FL 32750; **(407)331-1424.**

## GATEWAY 2000 ANNOUNCES $195 V.32BIS MODEM

Gateway 2000 has virtually taken over mail order merchandising of PC systems from Northgate, Dell, and Zeos. The company has offered extremely capable equipment at very attractive prices. From our point of view, they've gained another "first" in the world of modem pricing - albeit a qualified one. The company is offering an internal circuit card modem with 14,400 bps V.32bis capability at the first sub-$200 price - **$195**. The catch, you have to order a Gateway computer system, or be an existing Gateway customer, to purchase the modem. Gateway 2000, 610 Gateway Drive, North Sioux City, SD 57049; **(800)523-2000** or **(605)232-2000** voice; **(605)232-2023** fax.

## SEARCHLIGHT SOFTWARE OFFERS DEFINABLE MENUS IN NEW 2.25 RELEASE

Searchlight Software debuted version **2.25** of their popular SLBBS software product in late February at Eastern Lights '92, their annual sysop convention in Capital Centre Maryland.

The primary new feature in the 2.25 version is a built in menu editor allowing sysops to alter the product's default main menus and build their own hierarchical menu structure from scratch. The editor is notable in that no complicated macro files or scripts are required to construct the menus. The menu editor itself is an easy to use menu-driven program to set up the BBS menus. Menu commands can call internal Searchlight functions, external DOOR programs, or other menus. The system can also "autoexecute" certain command sequences.

According to Searchlight author Frank Larosa, "I've heard a number of people request the ability to put their own commands on Searchlight's default menus. Rather than create a simplistic facility, I decided to build a completely configurable menu system - some have even called it a BBS language - that lets the Sysop decide exactly what every menu will look like and what each choice will do."

The menu items can also be keyed to user access flags. In this way, it is possible to construct a system where the caller himself can select from several menu arrangements. A caller who used QWK mail services extensively might opt for an arrangement that allows them to logon and immediately go into a mail exchange session, while someone else might favor a trip to the file areas. In this way, the system not only becomes the creative expression of the operator, but operators can offer several arrangements for callers to choose from.

Other features of Searchlight 2.25 include the addition of user expiration dates to better support subscription oriented boards, binary upload of text to the full screen message editor, and binary download of text from the message areas, global thread operations (delete, forward, download entire threads with one command) and better support for virus scanning of uploaded files.

Searchlight is priced at **$89** for the single-user version and **$199** for **99** line multiuser versions. Searchlight Software, PO Box 640, Stony Brook, NY **(516)751-2966** voice; **(516)689-2566** BBS.

## OS/2 NOW AVAILABLE.

IBM has finally released **OS/2 Version 2.0**. The new release is supposed to run DOS programs, Windows programs, and OS/2 programs in multiple windows concurrently with true multitasking (a bit of a misnomer given the nature of the 80X86 microprocessor, but if it works at all, we like the idea). The best news is the price. Windows users can upgrade to OS/2 Version 2.0 for a handy **$49** by dialing **800-3-IBM-OS2**.

OS/2 has a pretty grim history, and multitasking operating systems of the past, including Unix and previous versions of OS/2, have suffered from a discouragingly complicated installation procedure. But the BBS world particularly needs a viable multitasking operating system that is really an operating system - not a third party add-on such as DESQview.

Currently, there are TWO multiline BBS models that work. You can have a roomful of PCs on a very stable and ideally a fast LAN with each PC serving a single telephone line. Or you can have multiple lines served by a single PC with multi i/o serial cards and a very possessive BBS program providing its own multitasking. The first option has an economic problem in that if your BBS is successful, you will wind up with 70 computers sucking electricity out of the wall and depreciating at an awe inspiring rate. Further, with 70 computers in operation, one of them is going to be broken almost always.

The second option suffers somewhat in flexibility - and in some cases performance. You can't run doors, etc.

The model we look to for the future would be a hybrid - a local area network connecting a series of PCs - each in turn servicing 6 to 10 telephone lines capably at high port speed and with each able to access door programs and other system resources without restriction. Unix almost accomplishes this now but realistically, 8 lines at 14,400 bps sucking files even on a hot 486 under Unix will cause the system to drill itself into the floor. It will be interesting to see if OS/2 can do better. If it can, we would look for OS/2 to make it in BBSland if nowhere else.

## DATA VIA CELLULAR - A NEW PLAN

Interest in wireless data transmission is growing. The problem is that many of the solutions either offer no hope of ever being usable from anywhere - or they are tied in with pricey high end marketing schemes aimed at truck drivers who don't know any better. We've covered a few of the interesting ones, but basically, any wireless road machine for data has to come back to either cellular telephone or possibly the PCN network still several years off to be viable.

It would appear cellular will happen. Cellular telephone airtime charges make data a bit less than a bargain, but we've still been a little amazed at how

slowly data has made any inroads. There just AREN'T any pocket cellular telephones with the obvious RJ-11 jack feature. And marrying transportables to cigar box sized "data" appliances to connect your laptop to is just to clunky and sprawling to work.

But IBM has launched a plan in conjunction with nine cellular telephone carriers titled **CelluPlanII** that may provide a crack in the wall for data junkies who's rubber spends a lot of time meeting the road. Technically, the plan is to transmit data at 19.2 kbps over normal cellular channels using the slight pauses between words in voice communications. An effective data rate of some 9600 bps is expected. Better, they are talking about charging a flat monthly access fee plus packet charges rather than air time. Carriers include Ameritech Mobile Communications Inc., Bell Atlantic Mobile Systems Inc., Contel Cellular Inc., GTE Mobile Communications, McCaw Cellular Communications Inc., Nynex Mobile Communications Co., PacTel Cellular, Southwestern Bell Mobile Systems Inc., and U S West Cellular Inc.

## U.S. ROBOTICS POSTS RECORD SALES AND PROFITS

U.S. Robotics, Inc., (NASDAQ:**USRX**) announced financial results for the first half of fiscal 1992 this past April 23rd. Revenues for the six month period totalled **$52.9 million**, a **42%** increase over the same period a year earlier. Net income advanced **33%** to **$5 million** from **$3.8 million** for the year earlier period. Earnings of **$0.46** per share were recorded against **10,812,000** weighted average shares outstanding - up eleven cents.

Despite the reputation of the modem market as a "commodity business," revenues for the quarter ending March 31, 1992 were a record **$27,915,000** on sales of goods costing **$13,382,000** - a gross profit margin of **52.1%**. Sales and marketing comprised **18.9%** of the total while research and development came in at **8.5%**. General and administrative costs consumed another **9%** of revenues leaving an operating profit of **15.7%**. The quarterly revenues included a onetime sale of **$1.8 million** for a perpetual software license to the U.S. government. The company's balance sheet indicates a total net worth of some **$66,290,000**. U.S. Robotics, Inc., 8100 North McCormick Blvd., Skokie, IL 60076; **(708)982-5010.**

## FIDOCON SET FOR DALLAS SEPTEMBER 4-6

The 1992 FidoCon site selection process was concluded on April 6, 1992. The 10 regional coordinators voted on three proposals for FidoNet Conventions. The proposal from Ron Bemis of Dallas Texas garnered **7** of **10** votes with the remaining three going to Thom Henderson of New Jersey. The annual FidoCon will be hosted by nets **124** and **130** in **Dallas** at the Summit Hotel on **September 4-6**. The conference registration fee was set at **$178**. Authors of the proposal expect up to 200 attendees. Interested FidoNet participants can obtain more information from Ron Bemis at **1:124/1113**.

## WILDCAT! VERSION 3.5 DUE JUNE 21.

Mustang Software Inc., is preparing to unveil version **3.5** of their popular BBS software package, Wildcat!, late in the month. The new version includes a number of enhancements including:

Support for bi-directional external file transfer protocols such as Bimodem and HS-Link. Callers who use the Tomcat! door to transfer mail packets can use such protocols to upload replies and download new messages in the same process. The new 3.5 version also provides better support for all external protocols in that it uses the standard **DSZ.LOG** file to detect if a file transfer exceeds allowable limits. Callers can now make an external protocol their default.

New security features - Wildcat! uses a series of filter files to allow/disallow certain names and file uploads. These files include BADKEYS, BADALIAS, BADNAMES, and BADFILES. These filters can now use wildcard characters. For example, all ***.GIF** file uploads could be disallowed by putting *.GIF in the **BADFILES.LST** file. Questionnaires now support "answer required" fields which require a valid response before proceeding to the next question. Codes embedded in text files can now differentiate between callers of different security to display some information only to new callers.

Message functions - callers can now upload text files into the message editor using file transfer protocols. Long text files are automatically split into multiple messages. A fast login switch for mail fans allows them to jump directly into the Tomcat! mail door by pressing the exclamation point (**!**). Message threading based on subject has been added. Better communication between Novell and Wildcat allows LAN users to be notified they have a message on the BBS. Local LAN users can login using the **/B** NOVELL command line switch which automatically enters the users name.

File functions - marked files are now denoted on screen with an asterisk beside the line number making it easier for callers to see which files they've marked for download. A [**V**]iew file option displays text files directly. This allows operators to make text files viewable right from the BBS prompt line. Support for CD-ROMS was enhanced by allowing files marked with the **ON CD** flag to be automatically buffered by copying it to the hard drive temporarily for download. This dramatically increases speed of multiple-caller access to CD ROMS and makes use of CD ROM changers such as the Pioneer six CD changer possible on a bulletin board.

Configuration - the new version features and improved event scheduler, global configuration changes, and support for the faster 14,400 bps and 16,800 bps modems.

Wildcat! remains probably the only BBS software package commonly available at retail sites through some **250** plus Software Etc. outlets. The version 3.5 upgrade is free to sysops on the Auto Update Plan and **$15** for all others. Complete feature list for the new version is available on the Mustang HQ BBS. Mustang Software Inc., PO Box 2264, Bakersfield, CA 93303; **(805)395-0223** voice; **(805)395-0650** BBS; **(805)395-0713** fax.

# BOARDWATCH MAGAZINE

# Announces the Boardwatch 100 Reader's Choice Bulletin Board Contest

## WIN A FREE U.S. ROBOTICS HIGH SPEED MODEM

Boardwatch Magazine is sponsoring a contest to find the 100 most popular bulletin board systems in North America - and the ONE BBS most popular among callers. The contest will run from January 1, 1992 through July 1, 1992. Winners will be announced at the Online Networking Exposition and BBS Convention (ONE BBSCON) held at the Stouffer Concourse Hotel in Denver Colorado, August 13-16, 1992. The Boardwatch 100 list will be published in subsequent issues of Boardwatch Magazine and distributed in electronic form world-wide.

### PRIZES FOR VOTERS

All valid ballots submitted by voters will be entered in a random sweepstakes drawing. As of the opening date of this contest, prizes include two U.S. Robotics Courier V.32bis modems - and more are on the way. Two valid ballots will be selected from all entries and each will receive a free USR modem - the high speed modem used by more BBS operators than any other. Each voter can vote once, for a single bulletin board system. Each ballot must be fully completed, and we will verify ballots as necessary.

### HOW TO VOTE

1. Complete this ballot and mail or fax to:

BOARDWATCH MAGAZINE
READERS CHOICE BBS CONTEST
7586 West Jewell Ave., Suite 200
Lakewood, CO 80232
Fax (303) 986-8754

2. Or, dial the Boardwatch BBS at (303) 973-4222 and complete the online ballot provided on the main menu. Balloting closes at Midnight, July 1, 1992. NOTE: Boardwatch Magazine BBS is NOT eligible to win.

### PRIZES FOR BULLETIN BOARD OPERATORS

#### 1ST PRIZE

Air fare, hotel accommodations and registration at ONE BBSCON for two is awarded to the system receiving the most votes. Additionally, the system will be featured on the cover of Boardwatch Magazine with an accompanying feature length story about their system and a free full-page black and white advertisement in Boardwatch Magazine for a period of six months. Boardwatch Readers Choice Top Rated BBS plaque to be awarded at a special award ceremony at ONE BBSCON.

#### TOP TEN

The ten most popular bulletin boards selected by the voters will each receive an award plaque, a feature story on their system in Boardwatch Magazine, a special top ten BBS listing in the magazine, and a quarter-page black and white advertisement in three successive issues. Additionally, they will be listed in the Boardwatch 100 BBS list.

#### TOP ONE HUNDRED

The 100 bulletin boards receiving the most votes will each be listed in the Boardwatch 100 readers choice BBS list. This list will be published in Boardwatch Magazine and freely distributed electronically on thousands of bulletin boards world-wide.

We held a very rough form of this contest several years ago. It generated less than 1,000 votes to select the top 100 bulletin boards. That means they averaged just 10 votes per board. Your vote can have a tremendous impact on the outcome of this contest!

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## The Boardwatch 100 Reader's Choice Bulletin Board Contest

TITLE OF BBS YOU NOMINATE AS THE BEST IN NORTH AMERICA:_____

PRIMARY BBS ACCESS TELEPHONE NUMBER:_____

WHY IS THIS THE BEST BBS IN NORTH AMERICA?

_____

VOTER NAME:_____ VOICE TELEPHONE NUMBER:_____

STREET ADDRESS:_____

CITY:_____ STATE/PROVINCE:_____ ZIP OR POSTAL CODE:_____ COUNTRY:_____

COMMUNICATIONS SOFTWARE YOU USE:_____

MODEM MANUFACTURER AND MODEL:_____

HIGHEST MODEM SPEED YOUR MODEM SUPPORTS? [ ] 1200 bps [ ] 2400 bps [ ] 9600 bps [ ] 14,400 bps

AGE:_____ PROFESSION:_____

SIGNATURE:_____ DATE:_____

## HAYES ANNOUNCES ISDN SYSOP DISCOUNT PROGRAM

Hayes Microcomputer Products has become the first modem manufacturer to offer an Integrated Services Digital Network (**ISDN**) access port to their product support bulletin board system. Online With Hayes, the company's product support BBS can now be accessed via ISDN dialup at **(404)729-6525.**

ISDN is a new digital telephone service offering two 64 kbps voice/data channels and a single 16 kbps control/signaling channel. While a first, the ports may be of limited use for awhile. Currently, only ISDN customers in the Atlanta area can call the Hayes BBS over an ISDN channel. But a cooperative experiment between almost all the regional RBOC scheduled for this fall will connect **20 cities** nationwide in some experiments titled **NATIONAL 2** proposed by Bellcorp. Callers can also connect to the Hayes ISDN channel using **SWITCHED 56** services. Switched 56 is an older service offered in most regions of the country providing a single 56 kbps switched channel.

The Hayes product support BBS is also available via regular dialup at **404/HI MODEM** and **800/US HAYES.** The multiline system runs under TBBS software and currently services some 50,000 support calls monthly.

Hayes implemented the ISDN port using their pioneering ISDN terminal adapter. They have just released version 1.1 of the Hayes **ISDN System Adapter** with the addition of caller ID functions and software support for the Apple Macintosh computer.

The system adapter is an external device with an RS-232/V.35 connection for the computer, an ISDN Basic Rate S/T 8-pin modular connector for connecting to the ISDN line, and RJ-11 jacks for up to 3 standard analog telephone devices. In this way, you can port regular fax, voice, and modem connections through the ISDN System Adapter. For data, the system will operate at 56 kbps or 64 kbps on synchronous connections (B channel direct connect), and 300, 1200, 2400, 4800, 9600, 19,200, and 38400 bps on asynchronous connections. The device also allows X.25 sessions on the 16 kbps D channel of ISDN and supports multiple concurrent sessions through the Hayes Autostream for ISDN - up to four sessions over a single physical link.

The Hayes **ISDN System Adapter** carries a list price of **$1599**, but the company has also introduced a **50%** BBS operator discount program - reducing the price to some **$799.50** each. The Hayes support BBS provides a good bit of additional information on ISDN technology.

"The Regional Bell Operating Companies have de-classified deployment plans for ISDN, which indicates that by the end of 1992 over 50 percent of the business telephone lines in the United States will be capable of having ISDN service," said Hayes President Dennis C. Hayes. "Customer service has always been a top priority at Hayes, and as ISDN becomes more widespread, we want to make Hayes easily accessible for our ISDN customers."

One thing we found interesting is that you can call the ISDN line from either an ordinary analog modem or from an ISDN channel. The ISDN System adapter that answers the telephone ALSO has a Hayes Ultra 96 connected to one of the RJ-11 jacks - and to the BBS by serial cable of course. So ISDN calls go through the System adapter to an RS-232 port. Regular analog modem calls go through the System adapter, through the Hayes Ultra 96 modem, to a DIFFERENT RS-232 port on the BBS. The RJ-11 jack is therefore usable for INCOMING calls as well as outbound - allowing an ISDN line with a Hayes ISDN System Adapter and an analog modem to handle either type of call received. Even better, each call is on a separate ISDN B channel so it can actually handle an analog call AND an ISDN 64 kbps data call at the same time on a single ISDN telephone line.

Hayes Microcomputer Products, Inc., P.O. Box 105203, Atlanta, GA 30348; **(404)441-1617** customer service; **081/569-1774** London; **852/887-7590** Hong Kong. Hayes ISDN Technologies, 501 Second Street, Suite 300, San Francisco, CA 94107; **(415)974-5544.**

## WES KUSSMAUL TO ADDRESS SYSOPS AT THE ONE BBSCON

Wes Kussmaul, founder of the company that owns and operates DELPHI and BIX, will address the ONE BBSCON held August 13-16, 1992 in Denver Colorado. Mr. Kussmaul is Chairman and founder of **The Village Group**, a Cambridge-based group of enterprises providing interactive media products and services to system operators.

The title of his talk will be "***Running Your Board Like A Media Business***." "Having a solid, workable billing policy in place is a step in the right direction, but it doesn't transform a board from an avocation into a profitable business," said Mr. Kussmaul. "Once the policy is in place, managing it is like managing the billing and collections at a local newspaper or radio station - only more difficult. The sysop needs to be sure he or she has the right tools and procedures for the job, or the results will be disappointing." The Village Group, One Kendall Square, Cambridge, MA 02139; **(617)494-5226** voice; **(617)494-8942** fax.

## FUN FAX PHONE FACTS

A new type of bulletin board is maturing around the use of facsimile machines, with some interesting results. Typically, these databases of related information provide a "menu" you access using a touchtone telephone. By dialing a number and entering your own fax number and a menu selection, you cause the system to fax information to your fax.

There are two basic operating methods. In the first, you dial a system, enter a menu selection code, and press START on your fax. In the other, you dial the system, enter YOUR fax number and a menu selection, and the system dials you back to deliver the document.

The usefulness of these databases is increasing. Some are a bit esoteric, such as the **U.S. Navy's ICE CENTER** fax system at **301-763-3190**. This system allows you to select an Arctic, Alaskan, or Great Lakes area. An automated voice will prompt you to enter numbers on the touch tone to select a particular

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area. Then you press START on the fax and a map is faxed showing ice concentrations and thicknesses.

Perhaps more elaborate is the **MENU EXPRESS** fax service at **(201)939-7808**. This service lists restaurants and cafes in New York City, New Jersey, and Philadelphia. You dial the system, enter your fax number and a fax ID for the particular restaurant you are interested in. You hang up and the service calls your fax machine and delivers a fact sheet on the particular restaurant listing price ranges, smoking section, type of food, full address and contact information, dress code, payment options, entertainment, etc. Many of them actually include menus.

To get a list of restaurants in the database, you can dial the number, enter your fax number and then an area ID - **65** for New Jersey, **69** for New York City, or **72** for Philadelphia. The system faxes you a directory listing the restaurants and fax ids. We picked New York City and received a list of some **250** restaurants and cafes. Each entry also listed the telephone number of the restaurant, which is kind of handy. The fax id for each restaurant consists of the 3 digit area code and the LAST four digits of the telephone number. With this directory, you can then dial the service number again, enter your fax number, and the fax ID for a specific restaurant to get the profile fact sheet and in many cases a menu for that restaurant.

Another fax database service we found fascinating was the **EXPORT HOTLINE**. This is a database full of information about different industries and countries useful to those who are interested in exporting their products. The service was funded by some $400,000 from a group of companies interested in promoting export. The companies were led by AT&T and include Berlitz International, Delta Airlines, DHL Airways, and KPMG Peat Marwick.

The **EXPORT HOTLINE** operates at **(617)248-9393**. You dial the system, and enter your own fax number as a user ID. You can then enter a four-digit document code. The first you want to enter is **0000** to get the user manual. This document lists **68** countries and **58** industry codes - each two digits. You use the country code as the first two digits and the industry code as the second two digits of the four digit document code.

You might enter **3031** to find out about Ireland (**30**) and Franchise Opportunities (**31**) or **6534** to find out about Russian (**65**) heating, ventilation, and air conditioning (**34**) for example. There are also several "general" documents for each country including an "overview" (**01**), trade issues (**02**), investment issues (**03**), key contacts list (**04**), shipping requirements (**05**), and news/risks/advisories (**06**). We entered **4901** to get the Overview document on the Philippines and received a surprisingly detailed six-page document describing the country, products, government, history, right down to how many miles of railroads, how many telephones, the number of ships registered to the country, a complete list of provinces, total population (**65,758,788**), work force, unemployment, labor unions, minimum wage (**$4.23** per day) and that the maximum import tariff was to be decreased from **50%** to **30%** beginning July, 1992.

## INTEL INTRODUCES 20 MB CREDIT CARD MEMORY DEVICE

Intel Corporation has introduced a new data media quite possibly the key to truly useful portable notebook and palmtop-sized computers. The Intel **Series 2** memory card comes in **4 MB**, **10 MB**, and **20 MB** sizes providing a non-volatile memory storage capacity for hand held and palm top systems.

The card is based on Intel's new 8-megabit Flash File memory chip - a Flash EPROM (**E**lectrically **P**rogrammable **R**ead-**O**nly **M**emory). Technology has made the name of this device something of a misnomer. They are not actually read-only any more. The device allows data to be written and overwritten to the chip repeatedly - retaining the data indefinitely without power. The 20 MB card carries a list price of **$611.50.** Microsoft has also introduced a revised version of its Portable Computing Initiative operating system extension for the flash file system. This allows portable computers to address the **Series 2** card as if it were a hard disk drive. The device

is expected to replace hard drives on computers where size and weight may be important.

## MUSTANG SOFTWARE MAINTAINS VERIFIED WILDCAT! BBS LIST

Mustang Software, Inc., developer of the Wildcat! BBS software, has added a new service to their support board listing Wildcat! BBS systems worldwide. The database program allows Wildcat! operators to dial into the support BBS and enter their BBS telephone number, location, modem speed, and other information into a live database. Operators must call to update their entry every 90 days.

The database is used to print out a summary BBS list file (**WCLIST.TXT**) and this is compressed into the **WCLIST.ZIP** file. This BBS list is printed out weekly and made available on the Wildcat! support BBS at **(805)395-0650**. It's also posted to the CompuServe Forum (**GO PCVENA**, Library 9), GEnie RoundTable (MUSTANG RT, Library 1), and America Online Forum (Keyword = Mustang). The listing is also included with the Q-Modem Communications program as a dialing directory.

# *SHAREWARE FINDS*

## WINDOWS 3.1 ADD-ONS

The world used to be simple. Graphics people stand over here by the Apple - computer people line up by the IBM box. But things change. Microsoft has for years tried to get the world to go to a graphic interface similar to the Macintosh, but running on a PC, without cannibalizing their own DOS markets. Last year they did it. Microsoft sold over nine million copies of Windows 3.0. This comprises more machines running Windows than there ARE Apple Macintosh machines.

Currently a battle is in the offing between Microsoft Windows and IBM OS/2. I like OS/2. I like the concept of OS/2. I want REAL multitasking. OS/2 will likely be important to bulletin boards. But unless IBM spawns an entirely new approach to marketing software, it's destined to be a Windows world for better or for worse.

We've been playing around with the new Windows 3.1 version. It IS nice and a big improvement over Windows 3.0 - primarily in speed. Our 486 seemed to grow wings with this simple upgrade from 3.0 to 3.1. It's not a little faster, it's a LOT faster. The new SMARTDrive and 32-bit disk function seem to account for most of it. It is still NOT a communicator's dream. And basically, we are headed for a problem with not much showing up by way of solution. The multitasking GUI interface consumes a good bit of machine resources. So do high speed communications. After diddling every possible combination of **WIN.INI** and **SYSTEM.INI** options remotely related to communications, we can virtually guarantee we can break a high-speed session. This doesn't mean that ALL high-speed sessions have problems - it's just that you can't count on them NOT having problems whenever Windows is up. The 9600 bps V.32 connections worked fine. But with V.32bis, as sessions approach 1600 cps, things go awry.

Our "test" involved ZMODEM file transfers of compressed files on a local 14.4kbps link using the TELIX communications program. Without Windows, the transfer is flawless. With Windows, there seems to be a creeping situation where it simply falls behind the pace about 30 KB into the file transfer and begins offering timeout and CRC errors. This causes a transfer that was making some 1600 cps fall back to around 1250 - the maximum we could reliably achieve under Windows despite a variety of COM1FIFO, COMDRV30, COMIRQSHARING, and even COMBOOSTTIME settings in SYSTEM.INI. We ran it on a 386-20 and a 486-25 without success, using four different modem models - NO other apps running - and always in the foreground.

In any event, for 9600 communications, Windows works fine. At 14,400 bps, it does not make the trip. So what happens as we move into 20+ kbps modems and where will we be when 64 kbps or 128 kbps links are available via ISDN? Things DO get a bit gooey downstream.

Most of the computer press is reporting the end of Unrecoverable Application Errors or UAEs. We can't confirm that. The error message has been reworded, but basically, we found we could crash Windows pretty horribly with just a few minutes of that Rickard magic. We DO like the ability to be able to press **CTL-ALT-DEL** and "reboot" or terminate a single application without actually rebooting the entire machine. This works sometimes, but we managed to lock the entire rig up on several occasions. Microsoft seems to have charmed the pants off most of the press, and while we LIKE Windows better in the new version, primarily given the speed increase, it ISN'T as stable as you've been led to believe.

Another question that arises that never really had to be faced before. How do you provide product support for a software program with nine million users? No one has ever HAD nine million users to support directly. DOS was largely supported by the OEMs that put it with the machines.

Microsoft actually DOES provide a voice support line at **(206)637-7098.** Good luck getting past the busy signal there. They also have an automated voice BBS at **(206)635-7245**. We favor criminalization of voice BBS systems as an affront to common sense. If you still think interactive voice mail is just the way to go, dial one and learn the difference.

A number of companies have discovered that a BBS IS a viable support option for handling routine queries about common problems. Microsoft has put up a TBBS system at **(206)637-9009** that falls a bit short of the ideal, but does offer application notes, printer drivers, and some utilities for Microsoft Word, Excel, and of course Windows. One thing we DID find impressive was that Microsoft omitted some of the more technical esoterica of dealing with **SYSTEM.INI** and **WIN.INI** configuration files from their documentation. But they do offer a package titled the **Windows Resource Kit** providing more complete technical documentation for the "support professional". This kit sells for **$19.95** plus sales tax and **$2.50** in freight. You can order it by dialing **800-642-7676**. But actually you can dial the BBS and DOWNLOAD it for nothing.

One of the things that tells us that Windows is going to make it is the vote of the shareware developers. Initially, this amounted to a few icon editors and libraries and a bevy of wallpaper variations. But a more recent examination shows over a thousand titles now available under the Windows category and more substantial database, address book, financial, and communications applications are appearing. The appearance of increasingly better programming tools for Windows will undoubtedly accelerate the production of useful add-ons for Windows in the Shareware arena. And we're beginning to see a substantial number of bulletin board systems offering specific Windows areas on their systems, or in some cases entire systems devoted solely to Windows utilities and support.

A couple of examples. Kevin and Kristy Behrens operate a BBS out of their home outside Chicago in Aurora Illinois, titled **AQUILA BBS** at **(708)820-8344.** This 24-line PCBoard system features six Gigabytes of storage for some 50,000 shareware files, 450 mail conferences from FidoNet, ILINK, and RIME, and have just added Internet e-mail service for their callers. It's attractively laid out, growing fast and seems to be a comer in the BBS world. Behrens has caught the Windows bug and is using it himself almost exclusively now. He's set up a separate conference just for Windows programs (Join 6). This conference features 45 separate file categories for Windows 3.0 programs, including Communications Files, Icons, Finance and Tax Programs, Word Processors, ATM Postscript Fonts, and a slew of File Manager replacements.

A quick tour rendered several titles we found of interest. Unicom has gained some recognition recently, largely by being almost the only comm program that took advantage of Windows features. We found design of this program thoroughly bizarre, complicated to use, and nothing is where you might expect it to be. The registration reminder or "beg" screens pop up constantly every few minutes while using this program - rendering it largely useless even for trial purposes and thoroughly irritating. But a program titled **MicroLink** did catch our eye and turned out to be something of a diamond in the rough. This comm terminal program for Windows is currently in **Version 0.9** which explains some rough edges, but the program sports some features we just loved. The layout is quite clean. Attractive buttons do what you would expect them to do and it is really quite easy to learn to use. It features a capable dialing directory, the ubiquitous ZMODEM file transfer protocol, and relatively understandable configuration options. In fact, configuration was very easy - at the cost of flexibility. You simply pick your modem from a list. Unfortunately, it's currently a pretty short list.

But the first thing that caught our eye was a display bar across the top of the screen that is graphically just a dead ringer for the indicator panel on the front of a Hayes modem - black with delightfully realistic red globular LEDs for High Speed (HS), Auto Answer (AA), Carrier Detect (CD), Off-Hook (OH), Receive Data (RD), Send Data (SD), Terminal Ready (TR), and Modem Ready (MR). It also featured an IM indicator that we can only guess at. Better, the red LEDs actually DO indicate modem status. For those with internal modems, this display shows all the indicators external modem users take for granted to tell them when they're off hook, have carrier detect, etc.

The second surprise came when we downloaded a file using MicroLink. The ZMODEM file download started and a progress panel jumped up on the screen pretty normally. But it had a BACKGROUND button. Of course, we had to click on it. The program immediately backed out to our Windows desktop - displaying a square icon about the size of a postage stamp. This icon actually was a progress indicator that graphed file download progress across the icon as it gradually turned from white to red AND sported a two-digit percentage completion readout in numbers tall enough to fill the icon.

Theoretically, we could go use other Windows applications while this was going on in the background - and simply refer to this cunning little progress icon to see where we are in the process now and then. Getting this to actually continue the download at 14,400 bps in the background while performing other chores was another matter. We crashed and burned pretty badly when we started using other applications during the download. But as we noted, most of the problems with high speed links seem to be with Windows itself. At 2400 bps it works fine.

One thing we would have liked to see in the MicroLink program was a little better mouse action when dealing with the online services. You can paint a stripe over data on the BBS with the mouse, and then click on a **CUT** button and finally a **PASTE** button to capture the data from the screen and send it back out the comm port as a command. This allows you to easily "copy" a filename off the screen and send it back out to the BBS. But the right-side button on the mouse doesn't appear to do anything at all and clicking all these buttons just to send out a file name seems a bit tedious. It would be so much nicer to paint something off the BBS screen and just click the right button to send it out with a carriage return. The Telemate communications package offers this feature from a DOS shareware package for example. If something like this were implemented, MicroLink would essentially turn every BBS in the country into a mouse-driven Windows application. MicroLink 0.9 is available in the file **MLK096A.ZIP** and features a modest **$30** registration fee. MicroWerks Co., P.O. Box 768273, Roswell, GA 30076-8273.

Frank Mahaney of Danville California operates another BBS Windows aficionados will definitely find of interest. The **WINDOWS ONLINE INFORMATION DATABASE SERVICE** operates at **(510)736-8343**. This is a 9-line PCBoard system devoted primarily to Windows, OS/2, and related trivia. This system features over 1300 Windows related files. But it's not so much what this system has on it as it is HOW it has it. The file directories feature very detailed and informative descriptions of each program. An archived list of all files available is nearly 2 MB in size when uncompressed - largely due to these beautifully written file descriptions - some of them fifteen lines long.

Even better, WINDOWS ONLINE is virtually an electronic newsletter about Windows and Windows shareware. Mahaney has nearly a half-dozen people writing reviews of Windows shareware

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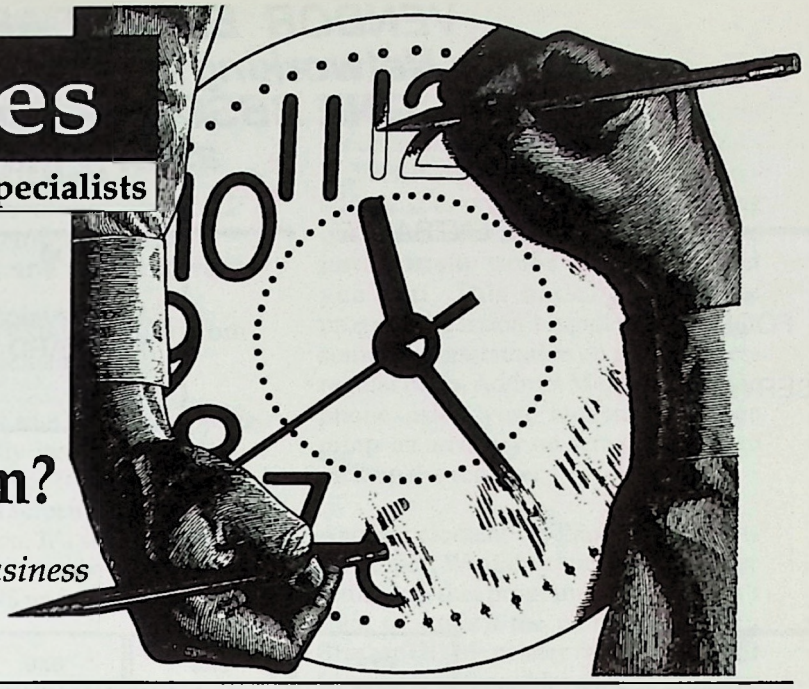

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## TBBS/TDBS SYSTEM ENHANCEMENT SOFTWARE

### User Manager

User Manager for TDBS systems is a full membership registration and tracking system that creates a true member data base. Its capabilities include keyword search and on-line user resumes to allow users to share information about themselves, a note pad to let you keep notes on individual users, membership tracking and expiration date notification, automatic changes in user access as users join as members or memberships expire, etc. Users can join as members or renew their membership using credit cards on-line. And User Manager now has several additional modules, such as a small on-line sales module, a user reminder module and a software update module. The program is priced at $69.95.

### User Manager - Software Module

An all new program that works with the User Manager to automate the updates of software to customers. You enter the user registration of software sales and any time you upload a new version of the software it will automatically present the updates to customers registered for that software package and give them the prompt to download it. This package also tracks all sales and prints reports on sale by customer or by software package, and by whatever time period you specify. Designed to reduce or eliminate the time and expense invested in updating software by mail. Please call for more information and price.

### Sales Manager

The powerful and productive On-Line Sales Manager. This on-line catalog sales program is written by Jeff Johnson, another pioneer in TDBS software, and it easily shows the power and capabilities of TBBS and TDBS. The Sales Manager will display a catalog of items for sale under categories you specify, each item can have a full descriptive text file attached to it and the user can place an order at any time and continue to browse through the catalog. When done the user selects to order and is presented with each item and given the opportunity to indicate how many are to be shipped. Developed as a modular package this software will handle everything from a low level order entry system to a fully featured point-of-sale package and do all the things you would expect of a full sales package. Please come and work with it on-line. This program is priced at only $395.00.

### Connex - The Connection Exchange

Connex is a professionally-based biographical, friendship, and matchmaking program designed to be used with TBBS and the TDBS option module. It allows members of your BBS to enter their own unique personal attributes, personality profile, and free-form interview. Upon completion of the user's profile and interview, Connex allows the user to make detailed selections, based on the user's own preferences. Over 350 man-hours in research and production, based on such works as Freud, Jung, and other psychological professionals, were required to create Connex and it is the most comprehensive software of its type available. Connex is complete with three databases, a biblical quote database, a gay oriented quote database or the original database. This program is priced at $139.95.

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# VENDOR EXHIBIT AREA FLOOR PLAN
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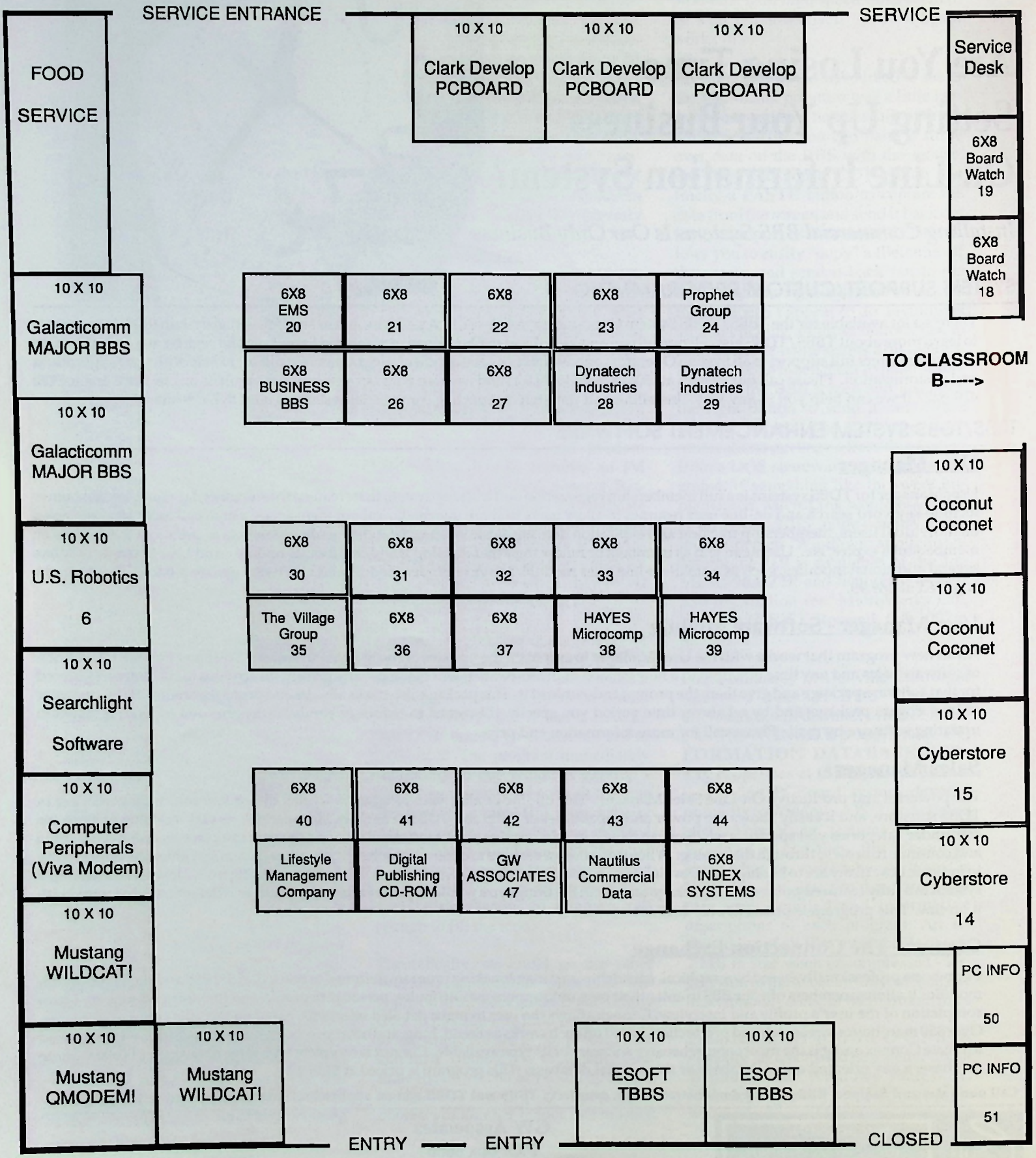
## as of 4 May, 1992



and news bits related to Windows, rumors, and developments. Each time you log on, you're blasted with a series of information screens that would be tedious were they not so superbly done - interesting and informative.

There must be about 2000 Rolodex programs in the shareware world. The first official act of most budding programmers is to write an address database. Well, the reason for this is people use them. And on Mahaney's system, we found one of the best. The program is titled **Address Manager for Windows** - currently in release **1.1a** and downloadable in the file **ADR11A.ZIP** as of January 3, 1992.

Morrey Wilson was a systems administrator at Boeing Corporation in Seattle in 1987 when he wrote his first Windows utility add-on titled **COMMAND POST**. A replacement for the stunningly limp file manager in Windows, this DOS-shell-like utility immediately caught on and the shareware world's gain was Boeing's loss. Wilson went on to found Wilson WindowWare, Inc. and the result is a whole series of application programs, including a pretty thorough checkbook/financial package, a text editor, a batch file program, and of course the ADDRESS MANAGER - our Rolodex. These are thoroughly professional Windows applications that are showing up on BBS all over the country.

Wilson WindowWare focuses entirely on Windows shareware and they do a pretty good job of it. Their WINBATCH program has been popular and WINEDIT is catching on for text editing chores. But Address Manager struck a chord with us.

Address managers seem to be either hopelessly overbuilt - offering tons of functions and a corresponding increase in complexity unnecessary to look up a telephone number, or else they tend to be underbuilt in that they just don't quite do anything useful. Wilson's Address Manager strikes a beautiful note of simplicity with an effective array of features. What we liked were four main elements:

- **1.** True Windows application with a simple interface - works like a Rolodex.
- **2.** Dials the telephone - no matter what number was in it, it dialed it right.
- **3.** Prints envelopes on an HP Laserjet Printer - we don't know how, and we don't want to.
- **4.** Imports existing data from other applications.

The program is a true Windows application and virtually installs itself. When you first call it up, it has an information/registration screen that is not in the registered version. It's simple, brief, informative, and that's the last time you see it. Pay **$39.95** and you don't have to see it at all.

Once past the shareware screen, you have a row of gray alphabet buttons across the top of the screen. Click on a button and the display shows your address list from that letter on down. This is just like a Rolodex with the alphabet buttons on it and everyone knows how to use it. Nothing could be simpler. The buttons are artfully done as 3D keys that stay depressed when you click them - just like a Rolodex.

The program is visually attractive and you can select colors, fonts, typesizes for both the presentation screen and the printed output. The entries can appear in Helvetica, Times Roman, Script, and several others in a variety of sizes and even italics. The result is a very customizable display.

Adding names is quite easy. The database will hold name, address, telephone numbers for home, work, and fax, some birthday/anniversary information, and a notes field. It works easily, but you TAB after entering each element and the ENTER key enters the entire record. We found ourselves constantly entering data in a field and pressing the ENTER key - which of course saves the record and we have to call it up again to modify it. You should be able to ENTER after each element to go to the next.

Once you have some names in the database, clicking on any name on the screen highlights that line in a bold black. You then click on **DIAL** to dial the telephone. The program features some setup where you enter your area code and any dialing prefix you like. Like many offices, we dial **9** for an outside line. Address Manager accommodates this. When you click on dial - it dials it correctly using the modem - adding your prefix characters, stripping out **1**+area code for local numbers - and just generally works on every number you dial. This basic, but a lot of programs just don't handle this without some user intervention on a more or less regular basis. Address Manager dials the phone using your modem, and then prints an advisory on screen for you to pick up the receiver.

Another element we liked was it prints envelopes. We didn't spend a lot of time setting up this program - and we don't want to - that's the point. We have a Brother HL-8E printer on the LAN (HP Laserjet II compatible) and the program said it does envelopes. We stuck one in the auxiliary tray, and clicked on it. Sure enough, the name and address on the screen printed on the envelope - first time every time. Actually, the print options are quite capable. It will print your database on five different types of Avery laser printer labels, print the selected name on an envelope - or all names on envelopes. You can print the whole list out on a page. And it does support various printers including some dot matrix functions. But if you have an LJII compatible, you won't need to worry about it.

The program is also designed to work with Microsoft Word Macros so that you can write letters in Word and fill in the names from Address Manager. The final element of interest with this program is that it will import data from delimited ASCII text files. If you can get your database to export a comma delimited ASCII file, importing your current list is no problem.

Notably, Wilson WindowWare also maintains their own product support BBS in Seattle at **(206)935-5198** featuring some of their other Windows products including WinCheck, a checkbook manager, WinBatch, a batch programming language for Windows, WinEdit - a programmers text editor, and Reminder - a time management program.

We found the WINCHECK program again to be pretty powerful. A personal or small business financial manager, it supports checking and savings ac-

# AQUILA BBS

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The AQUILA BBS Team (Left to right: Kevin & Kristy Behrens, Steve Williams, Chris Babb)

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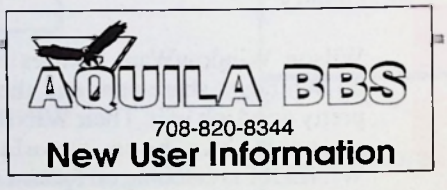
- Icons - Icon Managers
- Wallpaper - BMP's
- Multi-Media Related
- Fonts - Font Utilities

## New User Information

All first time callers receive by mail, our printed 'New User Information' and 'E-Mail Conference Directory' guide, as well as a 'Quick Command Guide' to help you get the most out of Aquila. The new user information covers system services such as answers to commonly asked questions, USAToday, Boardwatch Magazine, and Electronic Mail off-line readers. The 'Quick Command Guide' is a desktop lookup for using Aquila commands.




### Aquila Starter Kit

Callers that are new to modem communications will find 'The Aquila Starter Kit' a great time-saver. Easy for the beginner and helpful for the expert! This $39.95 kit includes the following:

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- Our complete file listing on floppy disk
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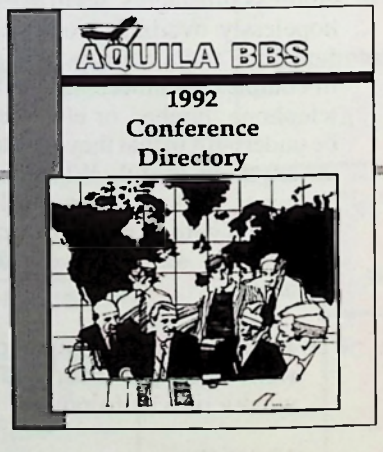
- Three month basic membership

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counts, Automated Teller Machine Transactions, and credit and debit card accounts. The program allows you to assign transactions to budget categories, and provides some detailed reporting functions. You can enter credit card transactions, checks, savings deposits and withdrawals, and the program faithfully totes up the results, records the transactions, and keeps track of everything. At tax time, you can print out a report showing how much was spent under each budget category item - no matter whether you spent it by check, credit card, or whatever. It also prints checks and not only uses a variety of preprinted check forms, but allows you to design your own check printing form by selecting data elements, placing them on an easel, and moving them around with a little hand. It will print in landscape or portrait mode in a variety of fonts and sizes.

The result is a complete personal financial manager we think rivals the commercial QUICKEN financial program and in many areas exceeds it - at a very similar registration price of **$69.95**. As a matter of fact, WINCHECK provides a function to import Quicken data files directly.

The products are also available on CompuServe in the WINAPA forum. Each of these programs represent superb application programs for Windows and each is priced at well under a hundred dollars. Address Manager is priced at **$39.95** form Wilson WindowWare, Inc., 2701 California Ave. SW, Suite 212, Seattle, WA 98116; **(800)762-8383** voice; **(206)935-7129** fax.

# MACINTOSH BBS NEWS

Bill Gram-Reefer

## EXTRA SERIAL PORTS FOR THE MAC

How many phone lines can a BBS run using just one Macintosh computer? A Macintosh Plus, Classic or Classic II offers Mac-based sysops two serial ports for multi-line BBS operations. With Apple Computer's **Communications ToolBox** (CTB) combined with a Teleport modem from Global Village, an operator can add a third modem via the serial ADB chain that connects the mouse and keyboard inputs to the CPU.

Or, if you have a Powerbook 170 (PB-170) with an internal modem, you actually could add a fourth line with the assistance of CTB. The intriguing notion of a totally mobile BBS will soon get a hearing in the court of practicality, but until you can afford multi-line "follow-me roam" cellular service, using a deskbound portable to host a BBS wasn't at the top of Apple's authorized list of cool applications for the PB-170.

CTB, which is available from Apple on many online services and comes bundled with System 7.0, enables the Macintosh to recognize more than its two built-in serial ports. In effect, it simulates additional "virtual" serial ports that can be addressed and selected by the user for connecting a variety of serial devices including scanners, graphics tablets, plotters and printers, as well as modems. Applications that are CTB savvy can automatically recognize and switch between all available ports. Too bad Compuserve's Navigator, or Prodigy, and even America Online, with its wide appeal to the Mac audience, do not currently support this increasingly important communications functionality.

The new Quadra series and other modular Macs, including the CI, FX, and SI, offer greater options with up to six (FX) NuBus slots for expansion. Several manufacturers offer NuBus expansion cards that offer four to eight additional serial ports for use in multi-channel serial communications applications like a BBS.

Early on, Apple actually made a serial port extender, but we couldn't find it listed in the new Sears catalog. Alas, there are alternatives. Mac multi-channel aficionados are most familiar with QuadraLink from Applied Enginering (AE). Honest DOS sysops will finally admit to not knowing everything when you tell them that Digiboard makes multi-port NuBus boards for the Mac as well as the PC. And, there is Creative Solutions, which in addition to marketing MacForth (a programming language), graphics compression, and SCSI acceleration products, offers its Hurdler line of multi-port serial cards.

## AE's NEW QUADRALINK

Applied Engineering, like a determined personal-injury claims attorney, has been successfully chasing the third-party Apple-peripheral ambulance for more than a decade. In fact, in 1985, A+ Magazine was occasionally mistaken for a slick editorial wrap for AE's extensive full-color advertising - the house account of Rickard's dreams. In addition to its original Apple II peripherals, AE offers high-quality enhancements for the Macintosh market. These products include external floppy disk drives to acceleration cards for modular Macs.

AE's QuadraLink, which can be found in mail-order ads for around **$200**, plugs into any NuBus slot to provide four additional serial-device compatible, **Mini-8 DIN** ports. The ports are accessible, as on a CI, through the panel opening on the back of the CPU case. With three QuadraLinks in a CI with monochrome video, that's **12** lines plus the serial and ADB ports for a total of **15** possible lines.

The problem is, however, even one of the Mac's original serial ports running full duplex at speeds greater than 19,200 bps begins to slow down the system quite noticeably. Because the QuadraLink's serial ports are similar to the Mac's, adding 12 high-speed modems will definitely choke the Mac's system performance.To solve this problem, AE has recently introduced QuadraLink+ - an enhanced version of its namesake. The four ports on the QuadraLink+ are capable of handling much higher speeds and reduce the serial processing load of the host computer. It handles this increased load with a technique called direct memory access (DMA). Instead of transferring individual bytes of data, the QuadraLink+ manipulates blocks of the stuff using memory access controller chips installed on the card. Because it directly accesses the system memory via the DMA process, the QuadraLink+ relieves the host CPU of most of its serial overhead processing. By routing high-speed serial activity through the QuadraLink+ ports, users will, it is

# SOFTWARE TO MAKE YOUR MODEM JUMP THROUGH HOOPS.

***Qmodem*** has been doing just that for the last eight years as the communications software of choice for well over a quarter of a million pioneering communication enthusiasts worldwide. It was one of the industry's best kept secrets and now MSI makes it available in a full commercial package, the first to include an off-line mail reader. File transfers scream at baud rates up to 115,200 using the latest in error-correcting protocols include Xmodem, Ymodem and Zmodem. Add a script language, 8 of the most popular terminal emulations, a dial-in host mode, context-sensitive help, and the easiest installation in the industry and you've got the best bargain in a general communication program available today.

***Wildcat!*** is the system of choice when it come to implementing a Bulletin Board System. Both single and multi-line versions are available supporting up to 250 incoming phone lines or LAN workstation connections with bullet-proof security. The message system includes private mail, forwarding, carbon copies, and return receipts with provisions for echomail connections and Netware MHS support. File transfers make use of any protocols desired including Xmodem, Ymodem, Zmodem, Kermit, and many more at speeds from 300 to 57,600 baud. The branching questionnaire allows formatted answers for order-taking or polling callers. WILDCAT! supports multi-tasking operation under DESQview as well as specific support for Netware operation.

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| LAN TIMES RATING | | |
|---|---|---|
| **Wildcat!** | | **2.0** |
| **Criterion** | **Weighting** | **Score** |
| Features | 150 | Excellent |
| Security | 100 | Excellent |
| Interoperability | 100 | Good |
| Performance | 150 | Excellent |
| Manageability | 100 | Excellent |
| Installation and Use | 100 | Excellent |
| Documentation and Support | 100 | Good |
| Error Handling | 100 | Good |
| **Overall Score** | | **Excellent** |

claimed, see improvements of up to several hundred percent - even running all four ports with sustained throughput of 57.6 Kbps. Pricing for the QuadraLink+ was unavailable at press time. Applied Engineering, 3210 Beltline Road, Ste 154, Dallas, TX 75234; **(800)554-6227** voice; **(214)484-1365** fax.

## DIGIBOARD'S DIGICHANNEL NU/XI

DigiBoard also offers a DMA-enhanced multi-port NuBus card for the Macintosh. Unlike its competitors, the **DigiChannel Nu/Xi** is available in four- AND eight-port versions. Both versions offer modem channel control, A/UX 2.0 support and are engineered to accommodate up to 32 channels installed in one computer.Developed around the Motorola 68000 12 MHz microprocessor, the NU/Xi supports 256K of 32-bit dual-ported RAM and up to 128K of ROM. The board also contains three programmable 16-bit timers, two or four 8530 serial communication connectors, and four high-speed DMA channels that allow two of the ports to handle full duplex, DMA synchronous connections. Similar to the QuadraLink+, the Nu/Xi is a front-end processor which does much of the work that is normally handled by the host's CPU. Plus, the on-board buffering (dual-port) allows both the board and the host CPU to read and write to the same memory for fast data transfer.

Unfortunately, DigiChannel boards for the Macintosh are hard to find and are not cheap, with retail pricing at **$995** and **$1,295** for the four- and eight-port models respectively. Telesaurus Corporation, a reseller specializing in BBS equipment, claims they don't get too many people asking for Mac Nu/Xis, and so must special order them on a one-day turnaround. The Telesaurus discount price - **$795** and **$995** respectively. If you work with a reseller or value added reseller (VAR), let them know that they can also get DigiChannel products through Gates/FA Distributing and other national distributors.

O.K., we're up to **35** possible lines with an FX. Digi International, 6751 Oxford Street, St. Louis Park, MN 55426, **(800)344-4273** voice. Telesaurus Corporation, 21832 Green Hill Road, Farmington Hills, MI 48335, **(800)488-9831** orders; **(313)477-7351** info; **(313)477-7351** BBS. Gates/FA Distributing, 121 Interstate Boulevard, Building 1, Unit 4, Greenville, SC 29615, **(800)332-2222** reseller (only) order line.

*DigiChannel Nu/Xi - 8 Port Serial Card for Macintosh Computers*

## EXTERNAL HURDLER SHIPS

Creative Solutions, Inc. offers its **Hurdler** serial internal cards in two- and four-port versions. The ports are equivalent to the standard ones supplied with the Mac, but an onboard 68008 coprocessor offloads most of the real-time serial activity from the Mac's CPU. The newest version of the four-port model **HQS v. 4.4A** was shown at MacWorld Expo in January. It provides reduced interrupt traffic and buffers up to 3,600 bytes of data on each channel so the CPU can service other higher-priority interrupt sources. This setup provides sustained throughput rates at 57,600 bps per channel. Current retail pricing for the **Hurdler II** series is **$299** and **$379** for the two- and four-port models respectively. The company offers an $80 upgrade path from the two-port model to the four-port version. Creative Solutions also offers a variety of proto boards to developers in blank and wirewrap versions for SE/30, or NuBus slots.

In addition to the Hurdler II, Creative Solutions has announced a SCSI-based external box preconfigured with four high-speed serial ports for use with any Macintosh, including the Plus and Classic. Scheduled for release in June with a MSRP of **$595**, the **SCSI/Serial** accepts up to four serial devices including modems and connects them to the Macintosh via one of its two DB-25 SCSI connectors that are just like those on the back of the Mac. As a SCSI device, the SCSI/Serial box allows users to daisy-chain up to 6 SCSI devices, including hard disks, CD-players, and optical and/or tape back-ups in bus fashion.

A spokesperson for the company claims that anything higher than a Plus will do about **1.1 MB** per second throughput. Further company estimates suggest that even with four, full-blast high-speed modems operating simultaneously, a user will see only a 4-percent system-performance degradation. Company sources indicated that several of these new devices could be cascaded to make room for eight or 12 modems and still accommodate an external hard disk, tape-back-up, and CD-ROM player.

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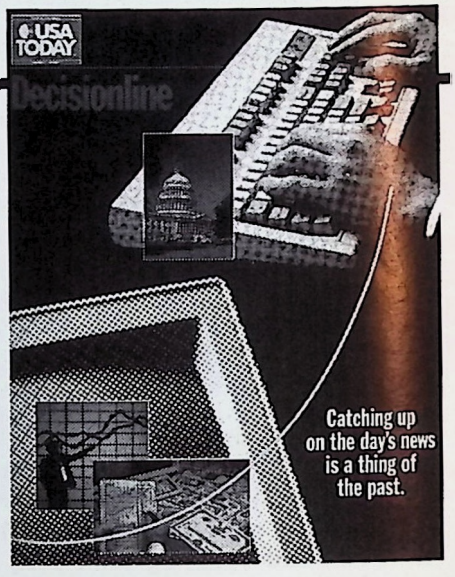


## BOARDWATCH Online Edition

While the online information services industry is broadening daily, the number one topic of interest to most callers is still how to put their modem into play for maximum benefit. And since March 1987, Boardwatch Magazine has been the best way to do it. Now, we've introduced an Online Edition specifically for display on your information service. Boardwatch lists product support systems, free government database services, and selected bulletin boards of note from all over the world. Boardwatch places the same information you now hold in your hands - the best information the online world has to offer each month - up on your caller's screen. Get the definitive publication for the online world for your system. Boardwatch is available at a quarterly rate of $75 or an annual rate of $250.

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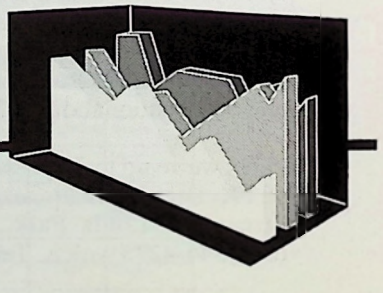

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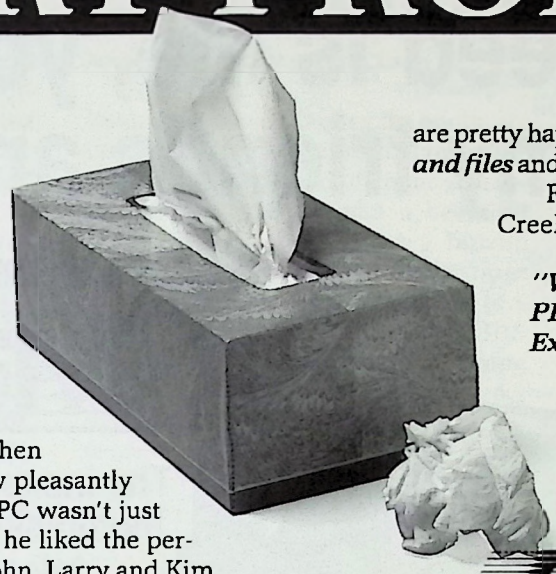

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What it means is this: you can buy the bass boat instead of the Quadra. With SCSI/Serial, sysops could (theoretically) operate a BBS on one lowly 4-MB Classic running System 6.0X with four high-speed modems, attach five other SCSI-compatible devices, and still have three ports for a printer, serial scanner, and Teleport fax/modem. We are led to believe that a sysop could get more work done with one computer. Now wouldn't that just be special?

The folks at Creative Solutions request that readers let the company know what other SCSI-connectable port combinations might be useful. LocalTalk? Parallel? Serial? Ethernet? So if Jack's peanut gallery has any suggestions - and we know you always do - send them to Christine Colburn at Creative Solutions. MIDI ports would be cool; and how about IEEE 488 GPIB instrumentation connectors so Con Ed can run real-time data acquisition off a Classic. Creative Solutions, 4701 Randolph Road Suite #12, Rockville, MD 20852; **(301)984-0262**.

## AT LEAST APPEAR BUSY

From MDG software comes **BusyOut**, a nifty and inexpensive utility that lets you take your modem off-hook so that the phone line appears busy. This important function allows the sysop to perform file maintenance, run a scanner, or do other activities where you don't want to receive incoming calls. The shareware program costs but **two dollars** and was written by David A. Down.

The program simply launches and sends an **ATH1** command at a speed of 1200 baud. The command can be sent to either serial port, though the default is set for the modem port. Once the signal is sent the program quits and you're free to close the host program. The host's modem initialization string subsequently clears the line for action when you want to come back online.

BusyOut also has a special feature for use with Tabby, the popular shareware Macintosh mail-door utility for FidoNet and other crash mail. Essentially, this feature allows you to BusyOut the phone line as you prepare to send messages to your boss and then again after you've received your node's incoming messages to allow for processing. For crash mail calls, it would only be used after TabbyNet.

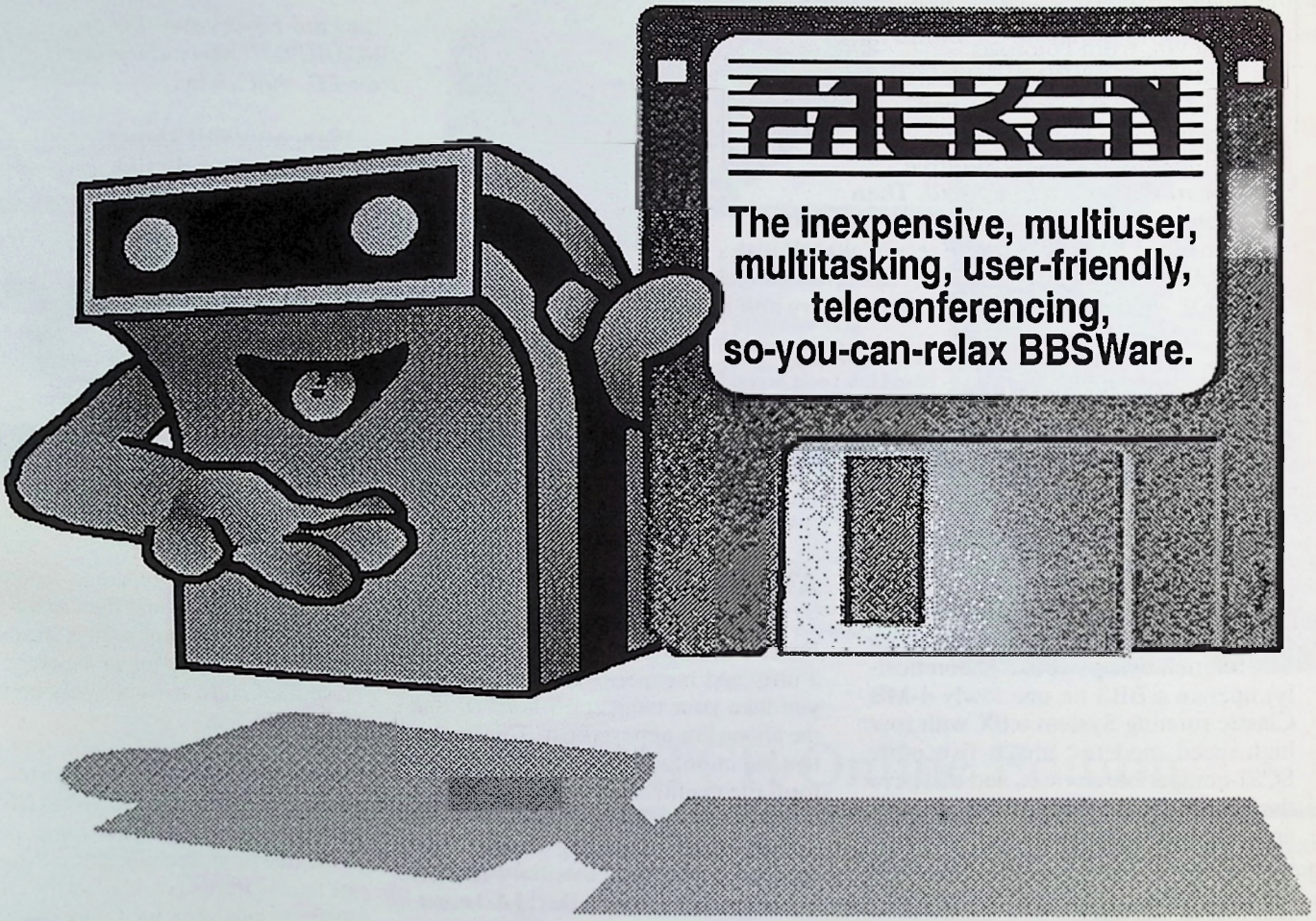
When you send your registration fee, the author explains how to skip the shareware dialog and associated delay so that the program will execute in only one second instead of 30 seconds. David Down is available on GEnie as D.A. Down and on AOL as D A Down. MDG Software; 2757 S. 134th East Avenue, Tulsa, OK 74134.

## MAC BOARD OF THE MONTH

This month's laurel is hurled eastward to the **John Hopkins University Bulletin Board System** (JHUBBS). This multi-line TeleFinder host system supports U.S. Robotics Dual Standard and Hayes Ultra 144 connections and offers over **600 MB** online with 2 gigs of software for the Mac as well as for IBM

## Going multiline?

# All you need is me, your PC, a few of my friends and this...

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[***Bill Gram-Reefer, based in Concord, California, is a publicist working with Comstock Communications and operates WORLDVIEW BBS (510)676-2919 running on a Macintosh computer. As the former editor of SHOWPAGE and associate publisher of Western MicroMarket, Bill has been writing about Macintosh computers since 1984. - Editor***]

# LEGALLY ONLINE

## PLAYBOY'S NEW PLAYMATE - EVENT HORIZONS BBS

by Lance Rose

One of the most common personal uses of modems today is transfer graphic image files between computers. Sources for images are cheap and plentiful - just pick up any picture book or magazine. Often the hard part is finding someone with a scanner to turn the picture into an uploadable computer file, but there are more and more of those as well. Many of the most profitable small BBS', not to mention CompuServe and other large information services, make a great deal of money from the high volume of image uploads and downloads performed daily across the country.

A large part of that volume is taken up by pictures of nude women and sexually oriented materials. It's hard to pinpoint the ultimate social meaning of this activity, but it's a fact that lots of people are spending lots of time and money sending computerized soft and hard pornography through the telephone lines. The cost is often far greater than the price of a newsstand magazine that contains the same picture at far greater resolution. Yet people keep doing it, and some BBS' profit greatly from it.

Behind the scenes, fueling the boom, are the source images used to create the digitized files. All too often these sources, whether they depict a beautiful forest, a way cool car or a buxom blonde, are copyrighted illustrations from magazines and books. This is a well-known fact of life to most BBS users. When the practice of scanning copyrighted images is debated online, the issue is usually not whether it's legal (except among the "information wants to be free" types), but who will get nailed by a copyright owner, and when.

It happened in March. Playboy Enterprises sued Event Horizons BBS for infringement. Event Horizons is one of the largest BBS' in the country, and well-known as a major center for uploading and downloading graphic images, including pictures of nude women and sexual images. Users are charged for downloading by connect time, so the larger the file and longer it takes to download, the more a user pays for the file. The BBS is said to gross over two million dollars per year, and has served (in the profit-making sense at least) as an ideal and model for others who run their BBS' as a business. Event Horizons makes files available not only online, but also in collections on disks.

This is an important case for BBS sysops, especially if the parties fail to settle and it goes to trial. The resulting decision could set some standards for copyright infringement by BBS', and help sysops better determine which files to keep on their boards and which are safest only when dropped in the bit bucket.

Playboy's suit actually claims two kinds of infringement: copyright and trademark. On the copyright side, nine pictures of scantily clad or naked women from the pages of Playboy Magazine (sandwiched, as always, in between the Serious Articles) were discovered in Event Horizon's file collection. The ladies pictured in the files include such well-known babes as Linda Evans, Vanna White and Jessica Hahn.

Playboy pulls no rabbit punches in illustrating its claim that the Event Horizons files are indeed direct copies. Playboy's legal complaint includes all of the identified pictures from the magazine and the corresponding printouts of Event Horizon's image files (Apparently, those exhibits are meant only for the judge. Playboy's corporate communications department made only the written portion of the complaint available upon my request. Is this corporate image management, or just their way of telling me I have to pay for those pictures like everyone else?). In addition to these pictures, Playboy identifies other files described in Event Horizon's disk catalog as probable infringements, even though Playboy has not seen them, based on descriptions of the files such as "pretty nude Playboy photo" and "Playmate; topless young body." If the descriptions are accurate, that's pretty damning evidence that someone infringed Playboy's copyrights, though of course the actual pictures would have to be produced.

The trademark claim by Playboy has two contradictory components. On one hand, Playboy claims that Event Horizon's use of the name "Playboy" with the files will confuse the public into wrongly thinking that Playboy some-

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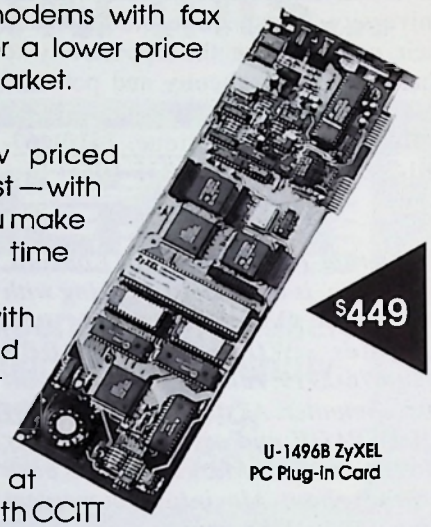

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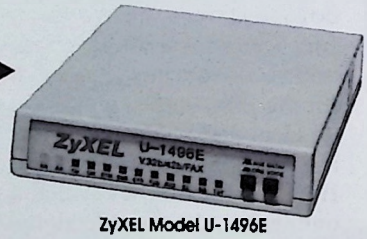


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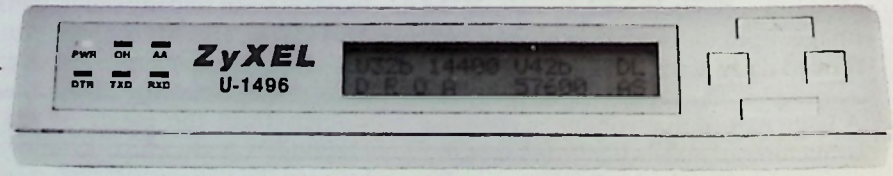


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how sponsors or authorizes Event Horizon's maintenance of the files. On the other hand, Playboy also says that Event Horizon's use of "EH" will confuse the public into wrongly thinking that Event Horizons, and not Playboy, is the real producer of the pictures contained in the files. Playboy is right that these names create confusion. At this stage, however, Playboy seems to be the one who is a bit confused by it all.

Playboy still has a lot of points in its favor, though. For instance, Playboy claims that Event Horizons' own copyright notice was found on some of the files in question. That one might be pretty hard for Event Horizons to explain away. Playboy also states that it sent six warning letters to Event Horizons complaining about infringement, and that Event Horizons did not stop the activities complained of. Again, if this is true, it makes it look like Playboy gave Event Horizons every opportunity to stop the claimed infringing practices, and only brought legal action when the practices continued despite the endless stream of letters.

As compensation for it's grief, Playboy is looking for a big payoff. First, it wants a permanent injunction against any further distribution of the files by Event Horizons. Second, it wants to receive all of Event Horizons' profits from the files, measured by the connect time charges paid by users downloading those files. This could be a very big amount if the judge accepts that measure of damages. Third, it wants Event Horizons to pay all of Playboy's legal costs in bringing the legal action - another big number, which Event Horizons will have to pay if Playboy wins. Fourth, it wants the court to impound all files and disks containing the infringing files, and the equipment used to make those files and disks - this could even mean the BBS itself. There are even more damage claims, but there's only so much room in this column.

Looks like a pretty grim situation for Event Horizons . . .

However, the game is not over. Jim Maxey, Event Horizons' owner, tells a somewhat different story. He says that all of the files in question were not created by him, but by BBS users who uploaded them for credits permitting them to download other files for free. His policy has been to ban all Playboy images he could identify, but he says that some slip through nonetheless. If the file description does not say the file is scanned from Playboy or another copyrighted source, he has little way of knowing where it came from.

Maxey confirms that Playboy first contacted him about a year ago. He says that when he first heard from Playboy, he redoubled his efforts to remove any Playboy-related files from his BBS, and sent Playboy letters certifying his removal efforts. However, Playboy never acknowledged receiving his letters; there was "no way to communicate with them." The next thing he knew, Playboy was suing him in federal court.

Maxey also claims that Playboy is trying to physically intimidate him. In particular, he says Playboy hired an enormous man, 250-300 pounds, to serve him with the complaint. When the process server came to Event Horizons' office, he allegedly smashed the receptionist against the door, seriously injuring her hip and causing her to miss four weeks of work. He says the man is currently being held by the police.

Event Horizons is changing its look and feel now, according to Maxey. "Adult images" form only a small part of the current file transfer activity on his BBS, as its focus shifts to education and entertainment. His current projects include creating collections of animations, and distributing the larger ones on CD-ROMs, including animations with astronomical themes such as a tour of the planets of the solar system.

Gee, after hearing Jim's side of the story, it makes you wonder why Playboy is so upset. Someone here is telling less than the whole truth. These stories are too contradictory to both be real. I suspect both sides have polished up their stories just a bit for prime time.

Playboy, for instance, is not beyond trying to pull the wool over the judge's eyes. At one point, Playboy claims that "access by Event Horizons to the [Playboy] copyrighted photographs should be presumed in view of the striking similarity between the images contained in the above identified Event Horizons' files and the corresponding [Playboy] copyrighted photographs." In other words, Playboy would have us believe that if you find an image scanned from a magazine on a BBS, we can presume the sysop did the scanning himself.

This is obviously not so to anyone who knows about BBS', and the statement reveals either ignorance or attempted deception on Playboy's part. Most image files on BBS' are uploaded by users. It may well be that Playboy's claim that Maxey created the files is true, but that is something that must be proved, not presumed. Most BBS sysops today are not creators of most of the materials on their systems, but distributors. This is a very important distinction in a case like this, because it means that the primary wrongdoer is the user who uploaded the file, not the sysop who merely made it available for download by others.

Certain parts of Maxey's story are also questionable. Though he claims that all Playboy images found on his BBS were uploaded by users, there are others who say it is common knowledge that Maxey himself stocks his BBS with his own scans from Playboy and other magazines. We will have to wait for the evidence to come in on this one.

It is also pretty hard to go along with Maxey's reasoning on Playboy's failure to acknowledge his letters to them. If Playboy did not respond to his letter, why didn't he pick up the phone and call them? Their number's in the phone book.

Of course, the parties may settle this case before it reaches trial. In that event, the main effect of the case would be a warning to other sysops not to become involved in infringing image files, at least when the images are Playboy's.

What if the case does go to trial? Maxey's shifting of the blame for infringement to his users raises the possibility he will use the same defense successfully used by CompuServe recently in obtaining dismissal from a libel suit against it. As readers of this magazine may recall, in the case of CompuServe v. Cubby, CompuServe was sued as the distributor of an electronic newsletter that supposedly contained defamatory comments about

a competing newsletter. The judge let CompuServe out of the case on the basis that CompuServe did not create the newsletter, but only distributed it. In a landmark ruling for BBS', the judge held that BBS' are protected by the 1st Amendment as distributors of free speech. It is impermissible to make a sysop absolutely responsible for reviewing everything that passes through the system.

For Maxey to successfully use this argument to escape the infringement claim, he will need to prove that all of the infringing files were uploaded by users, and that he was not actually aware of any of them before Playboy brought them to his attention. This could be a tough task, especially for the files that supposedly have Event Horizons' own copyright notice attached to them. It could be fun to watch him try, though.

Playboy's motives in bringing the suit can certainly be questioned. My guess is that Playboy is getting ready to begin its own online distribution of girlie pictures, and wants to clear out the established competition. Playboy pictures probably form only a small part of all the files on Event Horizons' BBS, but this lawsuit can have a disproportionately large effect on the BBS' overall finances. Playboy is letting the online world know that a Big Boy is entering the scene, so watch out. At this point, Playboy will only be the second major company of its sort in the online world. Penthouse already has its own BBS, and has announced in the business news pages that it sees its future in electronic communications.

However it ends up, this suit should serve as a word to the wise for sysops and users of BBS'. The days of the free ride in scanning printed copyrighted materials are coming to an end. The future of image files in BBS'ing will not (and indeed should not) be merely to reproduce mass-distributed print photographs and illustrations, but to serve as a new and different distribution medium. Graphic artists of all kinds who do not have access to print distribution channels should receive increasing distribution on BBS'. New image types, best displayed on computer screens (especially animations) rather than paper, will continue to develop and flourish. By helping bring an end to online infringement of its printed girlie pictures for gentlemen, Playboy is, likely unwittingly, helping to usher in a new and far more interesting online computer graphics regime.

[*Lance Rose is an attorney practicing high-tech, computer and intellectual property law in the New York City area, and is available on the Internet at elrose@well.sf.ca.us and on CompuServe at 72230,2044. He works with shareware publishers, software authors, system operators, technology buyers, interactive media developers, on-line database services and others in the high technology area. He is currently revising the book SYSLAW, a legal guide for bulletin board system operators. - Editor*]

## THIRD PARTY SUPPORT FOR THE BREAD BOARD SYSTEM

We often write about BBS software packages. But perhaps more lively and interesting is the market for third-party utility and add-on programs for BBS operators. No matter how a BBS package is designed, there are 300 or 400 things the operators wish it would ALSO do. This gives rise to a market for utilities that allows many of the operators to make a bit of revenue on the side by selling the produce of their programming efforts.

eSoft Inc. develops a BBS package titled ***The Bread Board System*** - and has since 1981. Originally available on the TRS-80 Model I, it was designed as a template system to allow individuals to create their own BBS systems without programming. As such, it has survived and prospered over at least two architecture changes (TRS-80, CP/M, IBM-PC) and more than a decade.

The software matured with version 2.1, a stable release in the field for over three years. Version 2.2 was scheduled for early 1991 and was delayed repeatedly until a very late introduction in November 1991. Worse, when released it had some desperately serious bugs in it - some that could stop the machine in its tracks.

The delays were stressful on TBBS operators and of course eSoft. After three years without update, the new version needed to be good. The lines of assembly language code required for 2.2 was more than double version 2.1. And according to author Philip Becker, the new features in 2.2 outnumbered the total features in version 2.1. By mid-March, the product was stable and virtually all of the anomalies were worked out of it.

In the process of providing bug fixes and updates, eSoft developed a unique update program and distributed it to their user base. The program allows sysops to call the support BBS at **(303)699-0153** and download a small binary file containing all TBBS modifications issued since release of the product. The program examines their current installation, and determines which modifications are missing. The operator can then direct it to install them - which it does quite automatically. To "get current" with any modifications and bug fixes that come out, all the operator has to do is dial the support board and retrieve a tiny binary file. This is undoubtedly the most cunning and easy to use product maintenance strategy we've seen for any software product.

The Bread Board System has developed a reputation at the high end of BBS products and is probably most common among government bulletin boards and company product support bulletin board systems. Hayes, U.S. Robotics, Microsoft, Borland, and a host of others use this software, including ***Boardwatch Magazine***. The product's relatively high price (**$399** for 2 users, **$895** for 16 users) has made it somewhat rare in the hobby market, but even there it has developed a loyal, if small following. Like all programs, it has strengths and weaknesses. Among the good news:

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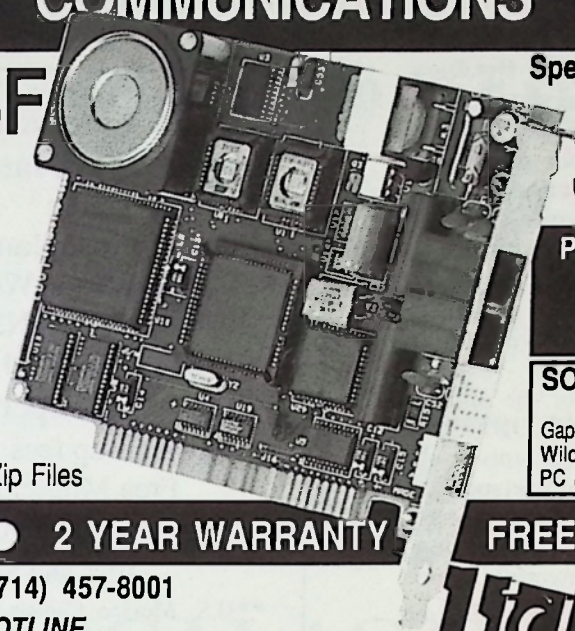

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**2.** With the addition of ***The Data Base System*** (TDBS) expansion module, it can run **dBASE III+** applications on all lines simultaneously. This is not an approximation. You can take dBASE code and dBASE files and put them up online. It handles all housekeeping necessary to allow 64 callers to all look at, and alter, the same record in the same database if they want.

**3.** It is superbly flexible at presenting textual information on screen in a variety of formats.

**4.** It is reliable. It is NOT at all out of the question to leave town for a week and come back to find it running as well without you as with you - even in fairly complex multiline installations. We've done it. This is actually quite unusual in BBS software. Most operators baby sit their systems rather closely to keep them running.

**5.** It is the most configurable BBS on the planet. You can make it look like any other BBS in existence, or like none of them. If you don't want to look like a hobby BBS, you don't have to. All menus are structured in the hierarchy you want with the screen content you want.

The product also has some weaknesses:

**1.** While the user interface and usability of messaging are superb, the message base itself is held in a single set of files of proprietary design. This message database is limited to **63,000** total messages. While this may seem generous, large mail intensive public systems may have a problem. If you want to carry 2000 Usenet Newsgroups, this limitation will effectively prevent it. Evem mail systems carrying 500 to 1000 conferences have difficulty with this limit. It also has NO offline mail reader for the **.QWK** mail packets, although we understand there is one in the works for a summer release.

**2.** File Areas are flexible and adequate, but there are other products such as ***PCBoard*** and ***Wildcat!*** that offer more caller features and better sysop file management utilities for heavy shareware file duties.

**3.** Sysop maintenance is relatively arduous and technical compared to most other systems. It has some unique maintenance features and allows remote maintenance in an almost inspired fashion, but it is work to keep this system's house in order.

**4.** TBBS is complex. The program does come with some easy install sample systems. You can install a BBS in 5 minutes. But if you are going to buy it to run the examples, you're missing the point of this system and could probably get by with less BBS. To use it to advantage, you must learn to master the intricacies of what is frankly a very complex and feature laden piece of software. It is NOT that it requires technical experience. If you WROTE DOS, you still have to learn the ins and outs of this system. It just has a tremendous number of options.

**5.** TBBS has a built-in multitasker allowing it to service multiple telephone lines. As such, it demands complete control over the machine. External programs, often termed DOORS, are

absolutely unusable. You can't run them. Not even if you want to VERY much. This limits the flexibility.

That last negative would seem a near death blow. TBBS is a very flexible package, but only within certain limitations. And most BBS packages have a rich set of third party door programs allowing endless modification of the basic BBS package through these modular add-ons. In answer to this eSoft devised a package titled ***The Data Base System*** (TDBS). TDBS is really a development language. It is based on the **dBASE** application language - with a few bells and whistles for the online environment. It uses dBASE **.DBF** files for databases - an almost universal database standard now that Borland has bought Ashton-Tate and Microsoft has bought Foxbase. This makes TBBS/TDBS the most powerful online database function you can buy for PCs - period.

The original vision for TDBS was for customers to write cunning inventory control programs, serious online sales/order programs, etc. But what it has done is foster a community of third-party developers writing add-ons for TBBS in the TDBS development language. Essentially - DOOR programs. The doors have to be written in TDBS/dBASE, but essentially, they act just as DOORS do for PCBoard, Wildcat!, and Searchlight BBS systems - modular extensions to the BBS. And many of these doors are not precisely serious applications. Like doors for other bulletin boards, many TDBS applications tend toward entertainment and games.

The market for TDBS applications is relatively small. Most companies simply write their own custom applications and the band of TBBS operators in the public dial up market is relatively miniscule. Further thinning the ranks is the fact that TDBS actually costs more than TBBS and not all TBBS operators have it. So the shareware concept really never got off the ground in TDBS applications. Most TDBS authors write their applications for their systems, and sell them by word of mouth to other TBBS sysops.

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The King of TDBS applications would have to be Pete White of GW Associates. From the day TDBS was announced, White, who does custom TBBS installations for a number of companies, set out to sell TDBS applications. Despite his crusty and sometimes abrasive personality, he's tenaciously sought to create a market for these applications and most observers concede that he's done so. Today, most estimates indicate a total universe of about 200 TDBS applications. White publishes an electronic catalog of these programs listing about **90** that he personally sells - remitting the lion's share of the price to the authors. His system in Massachusetts, The **Cul-de-Sac Bar and Grill (508)429-8385,** serves as test bed and demonstration system for most of these applications. It has every gee-gaw and add-on available for TBBS or TDBS hanging from it like ornaments on a Christmas tree. And you can download a catalog of everything available.

We recently looked at two of his favorites. One was **ProMenu**, an **$89.95** utility by Randy Harris that isn't actually a TDBS application. It's just an external program to design menus. **ProMenu** was designed to easily create and edit ANSI, ASCII and IBM Graphics menus for TBBS systems. Actually, the program works for all bulletin board systems. Most BBS operators use a shareware program titled **THEDRAW** to design ANSI text files for use on bulletin board systems. **ProMenu** is a design tool that lets you do the same thing, but automatically saves the result in ANSI, ASCII, and IBM Graphics files. They are NOT duplicates in appearance, but do contain the same commands and text.

The way this is done is by separating the creation process into three functions - a background, a drop shadow menu box, and the text within the box. We found the design process of this program ***terribly*** awkward. But the results were rewarding. You start with a "template" for the background. Actually, you can pick from **125** templates included in the program, or design your own. Many of those supplied were extremely attractive. Next, you set a background color configuration that allows you to change colors of almost everything on the

template - background, box border, text, etc. Finally, you enter your menu text in a separate list format.

The program puts together a composite screen that represents the final ANSI menu. It is powerful in allowing you to design very attractive screens quickly and without a lot of artistic talent. Most of the control functions of this program were awkward and non-intuitive, but we were able to design a menu - far beyond what we could have done in THE DRAW, in about thirty minutes. It's less creative than the draw, and more specifically directed at making menus.

The miracle happens when you save it. The ANSI screen is saved as a copy of the screen created. The ASCII file is assembled just from the text of the menus, in an attractive but separate arrangement. And an IBM graphics file is also created that tries to reproduce a black and white version of the ANSI screen - without ANSI control codes. Rather than three duplicates with/without the codes, you wind up with three different menus, each appropriate to the strengths and weaknesses of the available terminal emulation.

The best part of ProMenu was that it ALSO lets you insert macro codes into the menu to display such things as caller name, time, date, time remaining, what line they are on, what baud rate, etc. When a caller views the menu, this variable information appears on screen.

**CD-ROMS**

Another area where TDBS applications are booming is in CD-ROM management. The costs of casting shareware collections into CD-ROM are dropping like a stone. As a result, we're seeing CD-ROM collections come out quarterly at costs well under a **$100**. For small bulletin boards, this is the easiest way in the world to add a base file collection quickly and easily. And several CD-ROM vendors are targeting the BBS market specifically. These are CD-ROMS you are encouraged to put up online. For **$300** to **$600** you can add a CD-ROM drive to your system, slip in a CD-ROM, and have **500MB** to **600MB** - 10,000 files or more of cataloged file areas online in an hour.


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One of the pioneers in this concept of CD-ROM shareware collections for bulletin boards was **Night Owl Software**. They currently offer three titles. ***Night Owl 4*** contains **11,000** shareware programs at **$99**. ***Night Owl 5*** contains over **10,000** programs at **$99**. Their most recent intro is ***Night Owl 6*** at **$139** with **7800** programs. Night Owl Software, 219 Potomac Ave., Buffalo, NY 14213; **(716)886-2726** voice; **(716)886-0545** fax; **(716)881-5688** BBS.

Tony Davis, a TBBS operator from Oklahoma City, has gone into the disk pressing business himself. His **Mid-Americ Digital** label has introduced two titles in the past few months that offer very good collections at a very reasonable **$59.95** each. ***Magnum ONE*** is a basic shareware library collection of **8255** programs while ***Magnum Sight & Sound*** offers **11,155 GIF** image and sound files for Soundblaster and Adlib sound boards. The first press of Magnum One sold out in weeks just by word of mouth within the sysop community and at the $59.95 price, these CDs arre a bargain. Mid-America Digital, 1501 SE 66th Street, Oklahoma City, OK 73149; **(405)677-6136** voice; **(405)677-9663** fax; **(405)386-4599** BBS.

**Digital Publishing Company** of Golden Valley Minnesota also provides CDs for bulletin boards. Their ***Shareware Gold II*** product provides **250** selected shareware programs at **$129.** The ***Windows Shareware Gold*** title offers **400** selected programs for Windows users at **$179**. The ***PC-Game Room*** title provides some **1500** game programs along with over **800 GIF** images at **$69.** They've actually done a CD specifically for **Wildcat!** system operators titled ***Wildcat! Gold*** that includes directories already setup with **5000** files for Wildcat! plus a version of Wildcat! test drive on the CD. You can actually install and run a BBS from this one CD-ROM at **$179**. Digital Publishing Company, 8100 Wayzatta Blvd., Golden Valley, MN 55426; **(612)595-0801** voice; **(612)595-0802** fax.

TBBS can of course access CD-ROM drives. But the directory structures and file descriptions of many CDs are not very informative or usable as they come out of the box. Further, CD-ROMs are

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inherently slow - the best run with an access time of about 380 ms. With multiple callers all beating on the same CD-ROM at the same time, you can get into some pretty gruesome performance problems at this CD bottleneck. One of the most cunning TDBS applications we saw was a product titled **Master File Manager** by George Peace of Harrisburg, Pennslyvania.

**MFM** does a couple of things quite well. First, it caches CD-ROM file downloads onto the hard drive. In other words, when a caller selects a file for download from the CD-ROM, it copies it directly to the hard drive and the actual download is done from the hard drive copy. This buffering action dramatically improves the performance problem. Secondly, MFM takes the directories and file descriptions from any CD, and builds a dBASE database from them. This is what the caller actually sees and makes selections from. The process is quite automatic, and many operators are actually running multiple CD-ROM discs from the same CD-ROM drive by rotating the discs on a schedule. MFM maintains databases for each CD-ROM. Basically, Master File Manager lets you stick a CD-ROM into the drive, run a program, and have it on your TBBS system for the callers with little more than that. We received a copy of the program and ran it, and it worked so transparently, we're still not very familiar with this program or what it can do. About **600 MB** of file areas, neatly categorized and described, showed up on our BBS. We have to consider this **$89** program a brilliant piece of work. MFM was written by George Peace of Harrisburg Pennsylvania. Mr. Peace is the FidoNet Zone Coordinator for North America. He operates a TBBS system titled **Pennsylvania Online** at **(717)657-8699**.

Among the other TDBS applications in Pete White's bag of tricks:

**Auto Pilot - $89.95 - Ben Cunningham**
Auto Pilot allows you and your users to configure a string of up to 80 TBBS and/or TDBS commands to be automatically executed at logon. This string is created from a master list created by the SysOp that could contain up to 1000 commands. Each command is controlled by privilege level. Allows callers to automate often run functions on the board.

**Classified Ad Manager - $69.95 - Ben Cunningham**. Classified Ad System will handle an unlimited number of classified ads in an unlimited number of SysOp specified categories. Allows text search, deletes ads by SysOp defined number of days, allows for users to preset list of areas of interest, etc.

**Connex, Connection Exchange - $139.95 - Garry Grosse**Connex (the Connection Exchange) is a professionally-based biographical, friendship, and matchmaking program.

**DBEdit - $39.95 - Ed Ng**
DB Edit is a small TDBS on-line database editor that recognizes most standard dBase III+ commands. It is designed to allow for on-line editing of existing TBBS database files. Handy to have if you need to make changes to your data base, reindex files or repair corrupted data base entries.

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**File Mover - $69.95 Ben Cunningham**
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**Mass Mailer - $39.95 - Garry Grosse**
Mass Mailer allows you to send a personalized message to ALL users of your system, or to a specific set of users (based on privilege level). Each message is personalized, as if you wrote the message directly to that user, and reply is via the TBBS message base. Duplicates the "look & feel" of TBBS messages.

**On-Line Sales Manager - $395.00 - Jeff Johnson**. Here's your on-line catalog sales program that can be configured from a small order entry system to a fully featured point-of-sale package that will print invoices, track inventory, track billing and do all you could expect of a business package. Allows a text file to be attached to catalog items for sales information and descriptions.

**The TDBS Developer - $59.95 - Ben Cunningham**The TDBS Developer allows you to execute most TDBS commands in an easy to use menu driven environment. It gives you all the flexibility of the dBaseIII+ dot prompt in a simple to use format. Virtually all data base operations are supported. In addition you can create NEW data bases and indexes from within the Developer. Source code included.

**The Message Manager (TMM) - $179.00 - Ben Cunningham.**Supports up to 10,000 message areas; configurable full screen editor; messages can be edited after they are saved; import/export capability; subscription list for up to 60 areas; areas can be made anonymous; complex and/or search capability; text can be searched for strings; message waiting notification and many other features.

**TMM Net Mail Utilities - $50.00 - Ben Cunningham**. Net Mail utilities to allow The Message Manager to be used to handle net mail and echo mail. Individual SCAN and TOSS utilities include source code to allow support for other programs. With this option there is no longer a limit to the number of conferences a TBBS SysOp can handle and TBBS message memory can be reduced.

**Acey-Ducey - $29.95 - BBSoft**
Just like the card game of the same name, but enhanced. SysOp can configure the number of plays, number of decks per play and the minimum percentage bet on each play. Uses arcade game method of scoring, user can have multiple listings in high score display.

**Chess Challenge - $35.00 - Bitbucket Software**. Chess Challenge is a game designed to help people improve their chess playing abilities. It takes the best pieces from a real game, and combines it with something like a newspaper chess column. Already a popular game with users. New databases are in process and databases can be appended.

**Couch Potato - $49.95 - Garry Grosse**
Couch Potato is a trivia game, matching commercial products with their advertising slogans, phrases, and jingles heard on TV, radio, or as seen in the print media, past and present. There are over a 1000 questions in the database, and over 4000 different products are represented. Supports InterChat so users can chat while playing.

**Oil Baron - $49.95 - BBSoft**
Oil Baron is an oil drilling game that will either allow you to come away as an "Oil Baron" or all your gains might go up in smoke. How long can you survive before you make that one critical error? Buy a well drilling rig, make sure you change bits often, buy fire insurance and get rich.

**StarQuest III - $150.00 - Jeff Johnson**
Similar to Trade Wars and other 'galactic' games. Full control over Star Base, Port and Settlement creation. Players play against each other, multi line supported.

**Super Star Trek - $89.95 - Ed Ng**
Super Star Trek is a multi user version of the extremely popular game of Star Trek. Players engage the computer driven Klingons and/or other users with their space mines and phaser fire in real time. Users can battle the Klingons and each other at the same time. Very popular with users, addictive.

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## INTERNET NEWS

### EZ-MAIL - INTERNET MAIL FROM WINDOWS 3.1

Last December we reviewed a program titled **FSUUCP** (**F**ubar **S**ystems **U**nix to **U**nix **C**opy **P**rogram) by CalPoly student Christopher Ambler. **FSUUCP Version 1.2r3** had some rough edges, but filled an unusual function ably - connecting a DOS PC or laptop to a Unix Host machine to exchange mail by modem.

FSUUCP basically duplicates Unix mail utilities on a DOS PC. FSUUCP makes programs such as **mail**, **rmail**, **UUCICO**, **uuqxt**, **postnews**, **readnews**, etc. familiar to Unix users available on a PC. As such, FSUUCP allows you to read and write electronic mail messages, and then dial up a Unix Host on the Internet to send/receive mail automatically using the Unix to Unix Copy Program (UUCP) function. This is ideal where you only need to pass mail intermittently - once or twice per day, or where you might want to dial up from a laptop occasionally.

The program has advanced somewhat since our last review with a much better installation program, faster operation, and more stable UUCICO. Like most mail utilities, it remains somewhat complex for novices to install, but the new installation procedures help. The latest release is version **1.3** - available for download from **polyslo.calpoly.edu** in the **/pub** directory or directly from the Fubar System BBS at **(805)543-8227**.

We've used FSUUCP extensively here at Boardwatch. Currently, we actually use FSUUCP on our own LAN as an in-house e-mail system. We've also written a utility titled **Personal Internet Mail Processor** (PIMP) for TBBS to port messages from the Boardwatch BBS to FSUUCP file format. In this way, if you address a message to **user@boardwatch.com**, it appears on both the BBS and on our local area network.

While FSUUCP performs Unix mail functions admirably, Unix itself is not a particularly friendly environment. One of the design goals in developing FSUUCP was to duplicate the function and command structure of Unix. But for most DOS users, electronic mail using Unix commands is too cryptic to be useful.

This month, we took a look at a new shareware utility from Cinetic Systems in Montreal, Quebec. **EZ-Mail Version 2.0** is an electronic mail program designed for Microsoft **Windows Version 3.1**. It provides a very easy to use interface to read, write, and review electronic mail messages using the Windows interface.

EZ-Mail doesn't actually send mail. It's an interface program allowing you to read mail in your mailbox, reply to it,

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forward it, delete it, etc. Messages are listed in a window. By clicking on a message you can read it and a tool bar offers options such as send, reply, forward, etc. The actual processing of mail and transport to your Internet Host is done by a UUCP program such as FSUUCP. EZ-Mail is compatible with the following mail transfer programs.

- **FSUUCP** by Fubar Systems.
- **UUPC/extended** by Drew Derbyshire.
- **PC-NFS** from Sun Micro Systems Inc.
- **PC/TCP** by FTP Software Inc.
- **Pathway** by The Wollongong Group Inc.

So for our purposes, EZ-Mail acts as a graphic front end/user interface for FSUUCP. We gain the advantages of Unix/Internet mail connectivity from FSUUCP, and the ease of use from the EZ-Mail interface.

EZ-Mail appears on the Windows desktop as an icon artfully fashioned after the rural mailbox. When you open it, it will open your "mailbox." You can actually define multiple users each with different mailbox files. The act of opening your mailbox causes it to load the mail file FSUUCP creates for that user and individual messages are loaded in, catalogued, and displayed in a que. This is a rather painfully slow operation if you have a hundred messages in your mailbox.

You can click on a particular message to specify it and then on the tool bar to perform various read, reply, or forwarding operations. You can also save individual messages to a file. Once you've read a message, it is marked read. You can also mark messages for deletion. When you leave the program, it will archive read or deleted messages as you configure it in a separate archive file if you so desire and the messages are deleted from the main mailbox.

EZ-Mail uses the Windows Notepad as a default message editor. This gives rise to one irritating problem we found with the program. Any time you click on a large message to read it (say 40 KB), it dutifully reads the message into a notepad, and then copies whatever message happens to be first in the que into a series of notepads quite endlessly until notepad won't accept any more open files. This makes quite a vainglorious mess of the desktop, and the only solution we've found is to manually go close each of the notepads until you get back to the first. This is a rather obvious bug and we would hope they fix this before version 2.0 gets too widely distributed.

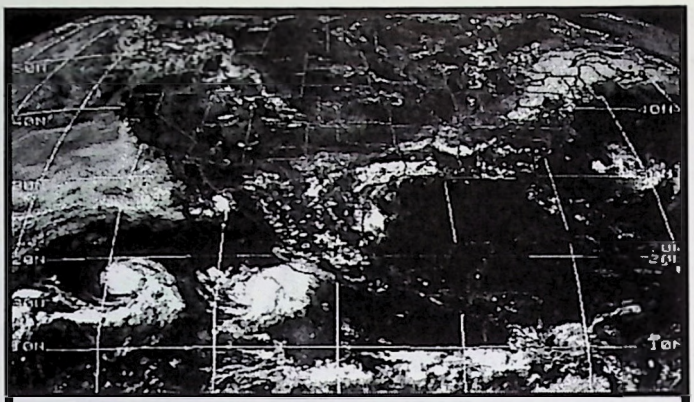
An attempt was made to make the installation and configuration bearably automatic, but it still requires some knowledge of where various FSUUCP files are located. So if you don't fully understand FSUUCP operation, you'll likely encounter some difficulties. If you are installing FSUUCP and EZ-Mail in the same process, you quite likely have quite an afternoon ahead of you. We found the effort worthwhile.

Like all Windows applications, we found we were doing a tremendous amount of clicking about to accomplish anything. But the toolbar and automatic archiving functions really were an aid in managing the 40 or so Internet messages we're receiving daily now. You can forward messages easily, copy messages to other people, save them as files, and the display of pending messages is actually quite informative and navigable. It makes for a much different environment for e-mail from anything remotely Unix like. We think the program will catch on.

EZ-Mail is available in the file **ezml20-f.zip** (Windows 3.0 full archive) or **ezml20-s.zip** (Windows 3.1 short archive) from the following Internet anonymous ftp sites:

**sun.soe.clarkson.edu**
**wsmr-simtel20.army.mil**
**garbo.uwasa.fi**

It's also available from CompuServe under **WINADV** and **IBMSYS** forums. Boardwatch BBS subscribers can download it from our system at **(303)973-4222**. EZ-Mail 2.0 features a registration fee of **$30** US or **$35** Canadian. Cinetic Systems, 4933 Verreau, Montreal, Quebec, Canada H1M 2C7; Internet address: **Cinetic@Speedy.CAM.ORG;** CompuServe: **71640,666; (819)820-0976**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## SUPERCOMPUTING INTERNATIONAL

It doesn't show up on a lot of local BBSs, but there is actually a thriving community of people involved in supercomputing. Massively parallel processing is a hot topic for these people. A magazine published out of San Diego California titled ***Supercomputing Review*** does a superb job of serving this particular niche of the computer world. In the past month or so, they've joined the trend toward marrying print publications with online services.

Most of those involved in supercomputing have access to the Internet. So a dialup BBS has some limited utility. ***Supercomputing Review*** set up a Unix based BBS connected directly to the Internet on an IBM RS-6000 workstation using **TEAMate** software from MMB Development. This allows most of the university and research level supercomputer users to logon over the Internet - a key element of success given the readership. It's called **Supernet International**, and it's a stunning service.

We were surprised both by the depth of this relatively new service, and the functions offered by the TEAMate software. We accessed the system using the usual telnet function by entering **telnet supernet.ans.net** from our host's command line. We were immediately connected to what can only be described as a BBS. Most of the services you telnet to seem to be online databases and a few special function chat or game systems. Supernet is a full BBS offering electronic mail, discussion forums, news and information files, a unique chat function, and downloads (more on that shortly).

The TEAMate software constructs almost everything in outline form - unique in the online world from what we've seen. Picture a cross between normal BBS menus and one of the topical outline processors popular in word processing circles a few years ago. While the system accommodates a variety of terminal types, it really seems to favor **VT100** terminal emulation and relies heavily on highlight bars and cursor actions to navigate. Each screen provides a menu across the top that you can access with the left and right arrow keys and a topical outline on the rest of the screen you may select from using the up and down arrow keys. The ENTER key activates the highlighted function.

The Supernet system was surprisingly rich given its recent January 1992 introduction. A **DAILY NEWS** section provides hundreds of stories about Supercomputing and engineering workstation developments from DEC, IBM, Cray, HP, NCR, and Sun in reverse chronological order. These are well written, timely news announcements. We learned Sun was introducing a new workstation at **$5995**, an historical low. DEC and Microsoft had announced an alliance of Windows NT with their new Alpha architecture. President Bush has acted to ease export restrictions on supercomputers to nine European countries and Australia. And so on. This comprises a prefiltered selection of current news stories tailored for those with an interest in supercomputers, workstations, and minis.

The system hosts discussion forums for several support groups including the ***Parallel Processing User Group***, and the ***Compilers, Languages and Programming Models User Group***. There were also discussion areas such as **VISION** with discussion and views of the future of supercomputing and **OPEN LINE** - general topics of your choice. These discussion areas too differ slightly from the traditional BBS message model. Callers submit "articles" under "topics" and the result tends toward lengthy, fairly well edited submissions as opposed to the brief, generally hastily drafted messages in the more common newsgroups and mailing lists ubiquitous across the network.

We found a **JOBS** area where help wanted ads were posted as well as a positions wanted area. Autoworkers take note, we found **35** positions advertised and **4** positions sought. Supercomputers appears to be a good field of opportunity.

***Supercomputing Review*** posts the full text of articles from each issue on the system along with subscription information. Throughout the system, whatever you are viewing is accompanied by a menu of options across the top of the screen. One of these that kept coming up was **DOWNLOAD**. Since we were on the system by telnet, we

assumed this was a meaningless function meant for dialup users. Telnet provides an interactive logon on Internet, but in general you don't transfer files via telnet. Incredibly, we found the **DOWNLOAD** option not only worked, but had some enticing functions we're not accustomed to seeing. XModem, YModem, and even **ZModem** were available. They shouldn't have worked, but they did. We selected an article from the March 92 issue on how CBS had visuals of the Winter Olympics site in the French Alps created from Satellite data for download and tried the ZMODEM option. It didn't transfer the article to our Internet host - our terminal program actually popped up a file transfer box and the article was downloaded to our own hard drive. We have NEVER seen this on the Internet. Another function we found absolutely charming was the ability to have the article e-mailed to us. By selecting **e-mail** as the download protocol, the system confirms your Internet address and then mails whatever you've selected to your Internet e-mail address. This reminds me of years gone by when you went downtown shopping, tried on some clothes, and asked the clerk to charge them to your account and have them delivered to your home. You then left the store empty handed and your purchases showed up at the house later. We could browse the system, select items of interest, ask to have them e-mailed, and move on without

downloading at all. It all showed up on our office LAN e-mail system later - an utterly charming feature.

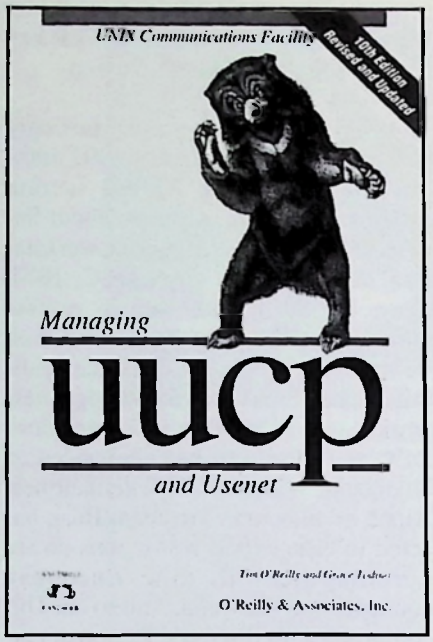
Another touch we found charming was an offer to e-mail us a ***Supernet Users Manual***. We responded in the affirmative and again, all the operating instructions for the system were delivered to us later.

The system has drawn an impressive **2500** users in the few months of "beta" operation. The userlog is quite "browsable" and we found users from all over the planet including France, Spain, the UK, Russia, and Australia with just a quick glance.

According to ***Supercomputing Review*** founder and publisher Eamonn Wilmott, they plan to augment the **64** port Internet access with a few dialup lines in the near future for those without Internet access. But since most of their readership has Internet access, we think they've made just the right selection of software and connectivity options to serve their own particular readership most admirably. Menu construction is superbly organized and the system is rich in extensive text articles on all aspects of the high end of the computer genre. This one's worth a look whatever your computing interest just to see a new and different kind of Internet online interactive service. If you have even a glancing connection to the supercomputing community, you must see this system. Supercomputing Review, 8445 Camino Santa Fe, Suite 204, San Diego, CA 92121.

## MANAGING UUCP AND USENET

O'Reilly & Associates is a small specialty publisher that focuses on very technical computer books for a small, specialized readership. They publish a carefully pruned list of books, many of which focus on Unix programming issues. But these books are strikingly understandable and usable and are referred to as **NUTSHELL HANDBOOKS**, everything you need to know about dauntingly technical subjects - in a nutshell.




Many of these remain in print for years with new and revised editions issued every year or so. One of the more popular titles is a particularly useful little 329 page book titled ***Managing UUCP and Usenet*** by Tim O'Reilly and Grace Todino. The 10th edition was released this past January 1992. Those familiar with the nutshell books will recognize them as the "books with the animals on them." Each title has a different animal drawn on the cover, for no apparent reason. For those who like to look at the pictures instead of reading the words, this is the "grizzly bear" book.

***Managing UUCP and Usenet*** is a very practical, hands on book on establishing a Unix to Unix Copy Program (UUCP) link between two computers and managing electronic mail between them. The book does not cover all of Unix or even all of Unix communications. Most such books casually MENTION the items we're dying to know about and either beg off with a reference to something else or note that we probably don't really need to know the details. Not this book. It describes files, directories, and entries specific to setting up a UUCP connection, testing the link, taking access and security precautions, and getting it in operation. From the general description of what a modem is and why you care, down to the operation of specific Unix programs, contents of systems files, aliases, and permissions. The esoterica of Unix is made plain.

Nearly half of the book is devoted to **Usenet News Groups**. This is a bit unusual in the Usenet is not really a Unix function or program. It is a distribution network for some 2000 plus topical message conferences that are passed to some **18000** news sites, including an increasing number of bulletin board systems. As such, there is not really a lot of print documentation for Usenet, it's another one of those things that grew up on pieces of electronic documentation scattered across the globe. ***Managing UUCP and Usenet*** tackles the subject and wins in print - how to install it, how to find a newsfeed, how it promulgates across the network.

**Appendix E** of this book is particularly interesting. It covers UUCP installations on DOS and Macintosh systems - mentioning specific programs both public domain and commercial and where you obtain them to accomplish the UUCP connection to the Internet for your system. **Appendix F** provides a **FAQ** - **F**requently **A**sked **Q**uestions regarding domain addressing, Internet, Usenet, hosts, and other topics of Internet lore that come up repeatedly.

Frankly the most impressive thing we found in this book may not be of interest to many readers. **Appendix G**, written by Jamie Hanrahan of Kernel Mode Consulting in Sand Diego, provides a marvelously detailed description of the **UUCP G** communications protocol. He wrote it after implementing a version of UUCP for VMS and it is detailed enough that you could probably write your own UUCICO program (the program that actually does the modem dialing, connection, and passing of mail files) from this specification. Who knows, we may.

A number of UUCP software programs and utilities for DOS machines we had looked at referred to this book as a source of further information. After looking through it, we understand why. If you are contemplating or struggling with connecting your system to the Internet via UUCP or planning even a passing contact with Usenet News Groups, this book should be on your shelf. Our highest recommendation at **$27.95**. O'Reilly & Associates, Inc., 103 Morris Street, Suite A, Sebastopol,

CA 95472; (800)338-6887; (707)829-0515 voice; (707)829-0104 fax; Internet: nuts@ora.com.

## ARCHIE - INTERNET ARCHIVE LISTING SERVICE

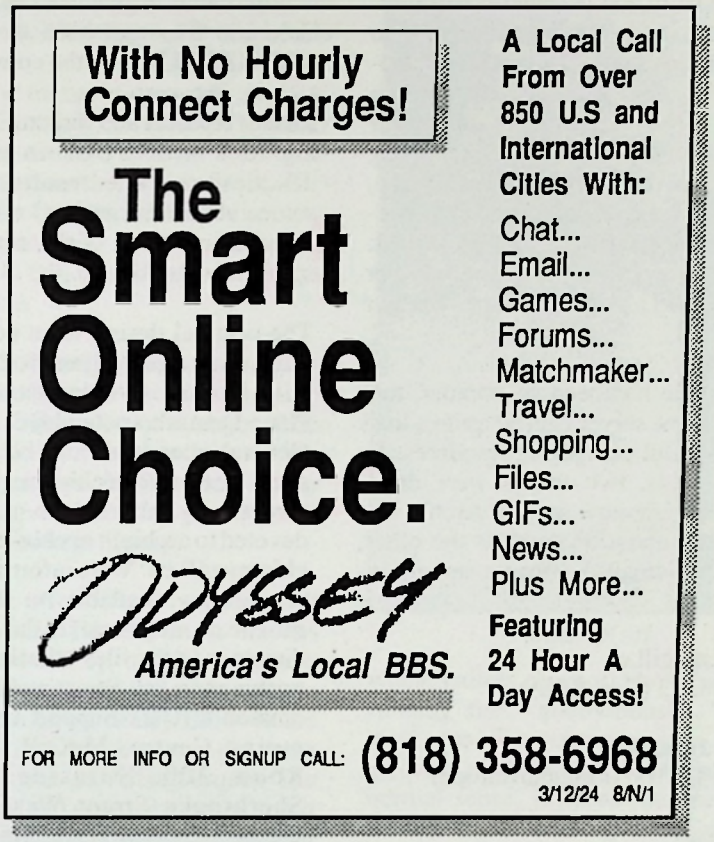
One of the attractions shared by both Internet aficionados and BBS enthusiasts is the never ending quest for files. A hundred Gigabytes (100,000,000,000 bytes) of files lie waiting for you to download them. And it seems a significant percentage of those online are determined to download ALL of them somehow onto their 40 MB hard drive.

In the Internet, this quest for MB is sated by the **anonymous ftp** function. **FTP** stands for **f**ile **t**ransfer **p**rotocol and it is actually a remote login function allowing you to "logon" to a system, browse its file directories, and "download" a file using the ftp "**get**" function. This transfers the file from that host to your host. You can then download the file in question from your host to your own PC using a normal file transfer function such as ZMODEM (commonly **sz** on Unix machines).

This sounds a bit tedious - and illustrates the difficulties of dealing with Unix and the Internet. But the reward is variety and volume. There are nearly a thousand **ftp** sites that allow anonymous logon - that is connection from those without an account on that particular system. To logon, you simply enter **ftp [system address].** You will be asked for your logon name. Rather than give your name, enter **ANONYMOUS** at the prompt. It will then ask you for a password. You can enter anything or nothing, it doesn't matter, but by convention, you normally enter your user identity on your own host.

Once on the system, you can change directories using the **cd** command, list directories using the **ls** or **dir** commands, and retrieve files using the **get** command. The **quit** command terminates the connection.

The **ftp** commands are quite similar to Unix commands, and the file directories you encounter are equally uninformative. No file descriptions really in most cases, just cryptic lower case file names. So you can root around on a LOT of ftp servers looking for anything or nothing.




Some Canadian students at McGill University in Montreal set out to make the hundreds of ftp sites holding millions of files a bit more rational. And their efforts have caught on. As a student project, they created a database listing ftp sites and the files offered on those sites in various directories. Updating the database was of course incredibly tedious, so they developed programs that would act as research robots to go out and ftp into each site and catalog what was on it, and then add it to the database. They called this the **Internet Archive Listing Service** or **ARCHIE** for short.

Today Archie has grown in several different directories. The database has swelled to some **125 MB** listing the contents of **900**-odd ftp servers, and over **1.5 million** different files available on the Internet. This represents well in excess of **100 Gigabytes** of unique files available for download. And all ftp sites are surveyed approximately monthly to update the system.

Archie started as a database you could use interactively to search for a PARTICULAR file or a file covering a particular subject. It was originally only on the McGill Archie Server and you used another remote login program - **telnet** - to login and interactively query the database. Today there are several other options as well - one of which is actually superior.

The original **telnet** function is still operational of course. To query the database interactively, enter **telnet archie.mcgill.ca**. When asked for a logon name, simply enter **ARCHIE**. No password is required. To use the database, enter a filename or portion of a filename. The Archie database will produce a list of all the ftp sites where you can obtain that file - and it even lists the directories where you will find the files. That's the basis of Archie.

In the meantime, a couple of other means of using Archie were developed. The most universally usable is of course e-mail. From any system capable of sending an Internet message, you can query the Archie server by simply sending it an e-mail message. Address a message to **archie@archie.mcgill.ca** and put the single word "**help**" in the subject

field. No body text is actually required. The system will return you a users guide by e-mail describing all the search options and techniques. Basically, you can send an e-mail message to the server address, and include the statement prog filename in the body of the message. Archie will then send you a return e-mail message with the search results. Actually, you can include any number of searches in a single message - one per line.

This service has been so popular, that net use of the server caused quite a load on the McGill computing resources. To alleviate this, two things were done. First, there are now several Archie servers, each about as good as the other, (identical actually). Current servers include:

**archie.mcgill.ca**
132.206.2.3 (Can./USA)

**archie.funet.fi**
128.214.6.100 (Finland/Europe)

**archie.au**
128.184.1.4 (Aussie/NZ)

**cs.huji.ac.il**
132.65.6.5 (Israel)

**archie.doc.ic.ac.uk**
146.169.3.7 (UK/Europe)

**archie.sura.net**
128.167.254.179

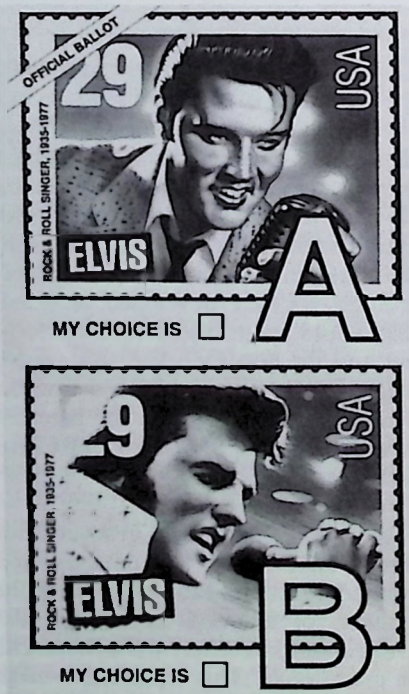
archie.unl.edu
(Login: archie, pasword: archie1)

**archie.ans.net**
147.225.1.2 (North America)

Any of these servers can respond to telnet or electronic mail queries. But to further distribute the load, the team developed another concept that is also pretty impressive. These are "agents". Agents reside on numerous hosts and more efficiently communicate with the servers to produce the results. The Archie Agent is titled **Prospero** and it is pretty good. Host administrators can obtain the source code for Prospero, compile it on their machines, and their users can then use Archie from the command line as if it were a LOCAL database. It still communicates over the Internet with the Archie server, but the user would never know it. On our local Colorado Supernet host, we can enter **ARCHIE UUCP** on the command line, and the Prospero program will produce a list of ftp sites and directories containing files with UUCP in the title or descriptions. The results appear on screen almost instantly. Considering the breadth and scope of the search, it is in some sense a miracle.

The original design team consisted of: Alan Emtage (**gajan@cc.mcgill.ca**), Bill Heelan (**whelan@cs.mcgill.ca**), Peter Deutsch (**peterd@cc.mcgill.ca**). General queries should be directed to **archie-group@archie.mcgill.ca**. Interestingly, there is a mailing list devoted to archie at **archie-people@archie.mcgill.ca**. More information on the program is available on the ftp host **quiche.cs.mcgill.ca** in the **archie/doc** directory in the files **whatis.archie** and **archie.man.txt**. Street mail may be addressed to Unix Support Group, Computing Centre, McGill University, Room 200, Burnside Hall, 805 Sherbrooke Street West, Montreal Quebec, Canada H3A 2K6; **(514)398-8117** voice.

## ELVIS'S E-MAIL ADDRESS




Dave Hughes once mentioned to me that after he was dead and gone he wanted his laptop buried with him with a telephone connection and solar panels for power. He hoped to have heuristic algorithms written by then that would go out into the online world, gather information, and communicate interactively with his many friends and correspondents online. In this way he would "live on" online after his mortal remains were interred. I found this a bit morbid, and perhaps a bit kooky. I cause people enough trouble online while I'm alive and the thought of carrying on flame wars after death was a bit much. Worse, I might find myself in a flame war with someone and find out years later that the person had actually been dead for several years. Finally, what if MY post-death heuristic self and Dave Hughes fought for years online after we were gone. Pretty scary stuff.

A friend from Apple mentioned that he thought a library in New York was maintaining an e-mail account for Elvis Presley. Elvis has caused quite a debate within the Postal service as to whether the stamp commemorating him should feature the young Elvis or the old Elvis. The service issued a post card ballot and over a half a million of them were sent in by those voting for one stamp or another. So we decided to chase down the "Elvis online" story. The response from Polly, at the Liverpool Public Library, is interesting. Apparently, Elvis is not the only "spook" online.

*From: polly@lpl.org (Jean Polly)*
*Date: Thu, 30 Apr 1992 10:08:59 EST*
*Subject: Re: Elvis*
*Reply to: REElvis*

*You wrote:*

*"I heard that there was an e-mail box at your organization for the use of one Elvis Presley. Is there any truth to this?"*

*Dear Jack- yes, it's true. Elvis has an account here at* ***LPL.org****.*

*There are several stories about how this happened. Here is one. We run a SLIP host connection on a dynamic ip address so no one knows exactly what address we may be using, however, one day we caught Elvis logging in here looking through our file of dead email. Maybe he was looking for his personal stuff, I just don't know. So we decided to give him his own email account. We consider it a public service.*

*I have no idea how he gets internet access but I suspect it's via some packet radio-friendly POP somewhere. I don't think they have T3 out where Elvis is. We also suspect our discussion group Folk_Music has attracted him here. It has about 130 or so subscribers around the world, and discusses new American music, such as performed by Mary Chapin Carpenter, Nanci Griffith, David Wilcox, and others. We built the discussion group with various pieces of software and hardware, held together basically with baling twine and bubblegum. We find we get about 10,000 packet exchanges to the piece of Double-Bubble. We have saved up enough wrappers to get a free decoder ring, too. grin*

*Anyway, please feel free to write to* ***Elvis@lpl.org****. The mail just sits here in his account until he logs in. From Out There. So it could be awhile till he gets back to you.*

*If we can get Elvis to sign an AUP agreement, we will upgrade him for full telnet and ftp privileges outbound.*

*You may also be interested to know that we have mailcenters named "Janis" and "Jimi" here, besides the predictable "StaffMail".*

*Most sincerely,*

*Jean Armour Polly*
*INTERNET:* ***polly@LPL.ORG*** *or* ***polly@nysernet.org***
*Liverpool Public Library*
*Liverpool NY USA*

# DIRECT DIAL BBS

## THE GARBAGE DUMP BBS - FORGING NEW LINKS IN THE WORLD OF CHAT

Dean Kerl spent the last few years working for Galaxy Telecommunications, a company known for ventures such as Telecomputing Magazine, Starlink, and Connect USA - all failed and gone at this point. But Kerl learned a lot along the way. This year he struck out on his own as a BBS operator and he's making some waves in Albuquerque New Mexico doing it.

With his brother David and partner Simon Clement, Kerl set out in December 90 to conquer the world of chat. This is a specific type of BBS catering to a social phenomenon in the online world - the urge to talk to each other real time by keyboard.

Kerl's BBS, **The Garbage Dump**, currently operates on 28 lines in Albuquerque using Galacticomm's Major BBS software. Major BBS has become the dominant choice for chat/multiuser game systems and Kerl has put it to good use on the Garbage Dump.

The system offers file downloads and electronic mail. But the main draw is chat. Callers fill up the **28** lines at a charge of **50** cents per hour - the system is currently logging nearly **13000** hours per month and has become the most popular system in Albuquerque. The callers come to know each other and it resembles nothing so much as a social club. With the current trend toward cocooning - people staying home for recreation, it provides a means to socialize from the comfort of your own home without dressing up.

One of the elements Kerl points to as a success factor is the monthly parties. Callers actually get together physically for social contact and this reinforces the imagery online. It started with a Halloween party last October - about 30 attendees. They whooped it up online so much afterwards that the concept grew. The last party held drew over 150 members. According to Kerl, these parties are generally held at one of the callers houses. The BBS purchases a couple of kegs of beer and some potato chips and that's about what it takes to have a party - a house, a keg, and some chips. The callers, as diverse a group as ever assembled, love it and according to Kerl, they talk about it online so much afterward that the system resources are a bit strained to handle the load for days afterwards. There have been two marriages in the past six months as a result of the service.

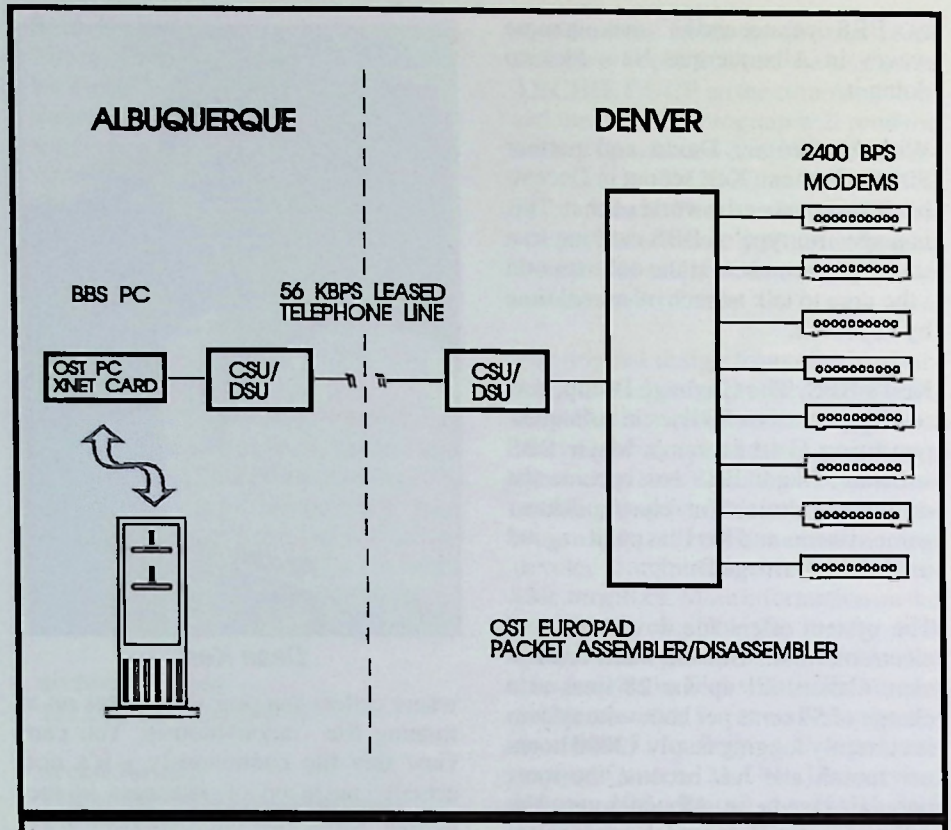
We found a couple of things we liked on the system. One was a **Graffiti Wall.** This is a unique type of message area

*Dean Kerl*

where callers can post short notes on a running file - anonymously. You can view this file continuously - it's not actually made up of messages in the normal sense, just one comment after another on a scrolling text file - each from a different caller. Under the threat of anonymity, some strange things are written.

There is also a multiplayer game titled Forbidden Lands. Forbidden Lands is a bit of an adventure game where from our point of view, you wander around picking up rocks, daggers, old gloves, and other detritus, carrying it until you run low on energy, and then dropping it somewhere else - all the while fighting off attacks of bats and other vermin. Since it is multiplayer, you may run into other hapless yucks similarly wandering around in there as lost as you are. You can chat with them and commiserate over your relative misfortune and compare notes on your efforts to get back out without hitting the **ALT-H** key. According to Kerl, we may be missing some of the point here, but we're learning.

The most notable thing about The Garbage Dump is probably Kerl's efforts at expanding it creatively. You might imagine **28** lines would provide enough chat participants for a lively discussion. But Garbage Dump also participates in a **National Chatlink** hookup that connects it to several other BBS from around the country in the evening where ALL the callers on ALL the BBS can chat together. This is actually the




***Garbage Dump X.25/Leased Line Link - Albuquerque to Denver***

brainchild of Tony Javoric of **Public Data Network**. Tony has put together a system using Sprintnet's X.25 packet network. The Chatlink function is just a bit of a sideline but it has some interesting elements. It only works with MAJOR BBS systems and requires purchase of a **$150** Chatlink software package add-on. Once installed, the sysop can "connect" his chat system to the national hookup at about **$3** per hour in the evening. According to Javoric, the system, which just started in the past couple of months, has had five systems and over a hundred callers online at the same time in a national chat hookup. Since the system operators are only out the $3 per hour for a single outdial line, it is quite economical. And it seems to be particularly attractive to smaller systems that with four or five lines can offer their callers connection to a largish collection of chat participants from across the country.

Kerl is making some other inroads in connectivity as well. Because Denver has a relatively large caller base, and excellent connectivity to such networks as PC Pursuit, he wanted to offer a local connection in Denver to his system in Albuquerque. We would have thought this quite expensive, and while it doesn't come free, Kerl has devised a pretty economical way of doing it. He connects the two cities with a single **56 kbps** leased line. Surprisingly, this only runs about **$500** per month in line charges. Each end of the line is connected with a device, much like a modem, termed a Channel Service Unit/Digital Service Unit or **CSU/DSU**. These are common in switched 56 kbps services and according to Kerl, refurbished units can be had for as little as **$375** each.

On the BBS end, the CSU/DSU is connected to the BBS via a simple serial cable and a packet card in the BBS PC. The packet card he uses is an **OST PC XNet** card - **$1595** list. In Denver, the CSU/DSU is connected to an OST **EUROPAD Packet Assembler/Disassembler** (PAD). This is the device that does the X.25 packet routing at the Denver end and effectively multiplexes the eight local lines onto this single trunk. It's also the most expensive piece in the puzzle at around **$3000**. The PAD is in turn connected to eight 2400 bps modems and in turn, they are connected to an eight-line hunt group of telephone lines. The total investment in the Denver link, including all the equipment and the line is around **$7000**.

Denver locals can dial the local **303-457-1111** number and connect more or less directly to the BBS in Albuquerque. There are no line charges and in fact, callers can visit the service for up to 25 minutes per day. Additional time and greater access levels are available at the normal 50 cents per hour rate. An online credit card system allows you to charge the initial **$20** fee to Master Card or Visa if you want to buy time on the system.

We dialed the local Denver number, connected via the local modem, Europad, through the two CSU/DSU and leased line and into the BBS. Then, we entered the National Chatlink area that is routed back OUT a dialout line to Sprintnet, to Tony Javoric's system in Grants Pass Oregon, and chatted with callers calling into there from cities around the country. This is a little like piling on. We tried to calculate the number of modems, CSU/DSU's, PADS, and other assorted hardware and parephenalia between our keyboard and these other callers. Answer - no idea. It must be over twenty devices.

Performance is nothing to write home about. You wouldn't want to suck a lot of GIF images over such a link and the keyboard delays can be a bit gruesome at first. But chat just isn't very demanding. A bit of a jerky 2400 kbps connection is actually pretty easy to get used to after awhile when you are basically just interactively typing to each other. According to Kerl, he could go to nearly 30 Denver local lines on the same 56 kbps link and unless several people were downloading files, it really wouldn't hurt performance noticeably.

Assuming the Denver lines achieve a similar popularity to the reception in Albuquerque, Kerl intends to duplicate the experiment in other cities including Dallas, Houston, Phoenix, Las Vegas, and El Paso. We think its interesting enough that we've asked him to come and describe it in detail at ONE BBSCON here in Denver this August. The Garbage Dump, POB 16032, Albuquerque, NM 87191; **(505)294-4980** voice; **(505)294-5675** BBS; **(303)457-1111** Denver lines.

## GIFFY GIRLS - AVOIDING THE COPYRIGHT ISSUE.

It might appear that the Playboy Magazine lawsuit against Jim Maxey's EVENT HORIZONS BBS has shaken the BBS world. CompuServe has certainly trimmed down their GIF image collection in the nude category and BBS operators are scanning their GIF wares frantically trying to determine what may or may not be a copyright violation. But the scenario isn't really unexpected. Most BBS operators saw it coming, they just didn't quite know what to do about it.

The problem is that competent 24-bit color scanners can now be had for about **$1300**. And there are numerous sources of nude images. Once scanned, an image uploaded to a BBS without a little ad for the BBS that scanned it can be very difficult to tell the source by looking at it on screen. It might be a scanned image of a Playboy centerfold, the work of a professional photographer desperately trying to protect his copyright and make a living, or somebody's sister who WANTS to be ogled worldwide online. They are all online in abundance and for the most part unmarred by descriptive information.

Two San Diego sysops have taken the matter into their own hands, so to speak. Marc Teitler and Bill Kinnon photograph local San Diego beauties, both in the buff and fully clad, scan the photos, and distribute them online via their bulletin board systems. The results are interesting, legal, and in all we viewed, tastefully done. They don't do fat chicks with donkeys and they don't scan magazine photographs. The result is kind of a "girl next door" quality that may lack some of the polish of high-end professional models, but seems a bit more wholesome in the process.

Kennon actually worked as a photographer for awhile and knows some of the basic tricks of making women look attractive on film. According to him, they don't really have too much trouble getting local girls to pose for photos. "A lot of the girls want a series of photographs for their boyfriends or for their portfolios. I do the shots at no charge in return for the right to scan them and distribute them online." Since most of the girls don't actually know anyone online, and the photos don't really identify them by name, they don't care. A few regulars are paid token stipends.

Kennon runs the **Classified Connection BBS** at **(619)566-7347**. The Connection is an eight-line Wildcat! system beginning to make it in the competitive world of subscriber based bulletin boards and the system charges a modest **$35** annually. According to Kennon, he will move the system out of his apartment to an office location in June to allow installation of more lines.

The system has the usual large library (1.1 Gigabyte) of shareware titles and mail, but the notable element is the collection of GIFFY GIRL portraits - nearly 500 shots mostly of local girls in various seductive poses and varying degrees of undress. This local angle has a couple of advantages. For one, several of the girls have become interested in bulletin boards. Four of them actually respond to electronic mail under a pseudonym associated with their photographs. So you can download a photo of CHARLY for example and then send her an e-mail message. The concept has proven understandably popular. For some of the girls, Kennon and Teitler actually print out the e-mail on paper and the girls write responses that they then enter on the system.

Teitler runs THE GENERAL, a ten-line Wildcat! system in the area. The two system operators work together on lining up models, scanning photos, and of course share the files across their two systems.

Eventually, they hope to distribute their GIF collection to other bulletin boards for a modest fee. Do-it-yourself nude photos sound like a good way to avoid the copyright issues, do something original rather than just passing on the latest smut, and we've got to believe the act of photographing nude women yourself just has to be more satisfying and rewarding than ripping them out of magazines. An interesting experiment. Bill Kennon, 9528 Miramar Road #277, San Diego, CA 92126.

## DESQVIEW FILE DISTRIBUTION NETWORK AND '65 NORTH - NORTHERNMOST FIDONET NODE

Peter Stern may not run the most northerly BBS on the planet, but we can't find one farther that direction. His

**65'North BBS** in Fairbanks Alaska at **(907)452-1460** (Fidonet **1:17/38**) looks pretty chilly from here.

The most notable thing about **65' North** is that it is the hub system for a subnetwork titled DESQview File Distribution Network or **DVNet.** DVNet exists to distribute public domain and shareware software utilities and programs for Quarterdeck Office Systems popular QEMM and DESQview 2.0 programs.

DVNet is one of perhaps a dozen file distribution networks springing up across the country. One of the developments that led to tremendous growth in Fidonet was the introduction in 1987 of the concept of echomail by Jeff Rush, a Dallas system operator who wanted to link message areas between bulletin boards in the Dallas area. The concept swept the globe and today nearly **15,000** Fidonet bulletin boards link approximately **400** bulletin board message areas on a bewildering array of topics.

The shared message areas relieved to some degree a very real problem on bulletin boards. If all messages were held in a common message area, the multitude of e-mail discussion threads made reading the messages terribly confusing. The initial and obvious solution was to provide multiple message areas on different topics and restrict discussion in each area to that topic. The problem was, that to provide enough topics for all callers, the caller population in each topic on a single BBS quickly devolved to 2 or 3 callers per topic. By linking these message areas between four or five hundred other BBS, each topic could have eight hundred or a thousand participants reading and writing on that one topic.

More recently, the same concept has been applied to the sharing of shareware software files. Rather than have thousands of BBS operators each out hunting down and posting the same shareware files, Ray Kaliss came up with the concept of a **Shareware Distribution Network** where shareware files were distributed to BBSs much as echomail was. The concept is catching on and today, there are about a dozen such networks, each specializing in a particular type of files.

Peter Stern's **65' North** is the hub of one of these networks. DVNet is one of the older specialized file distribution networks in Fidonet. When Quarterdeck Office Systems [QOS] released QEMM, the expanded memory manager, and DESQview 2.0, alot of Sysops discovered multitasking their BBS systems reliably was finally possible. Users began clamoring for programs written to run under the multitasking environment.

DVNet was started in 1988 to fill a void in getting software spread to as wide as audience as possible and to offer a centralized published listing of what is available and where to obtain it. DVNet nodes exist in the USA, Canada, Europe, Israel, Australia and Hong Kong thanks to the interest and support of sysops around the world. Access to DVNet software is free. The DVNet sysops pay the cost of moving the programs around the world.

DVNet supports software written specifically for DESQview and QEMM as well as technical support bulletins and patches. Examples of the programming interface are carried as well as Ralf Brown's DVGlue API library.

The files are distributed in five general categories

- **DVN-ADMN** Administrative lists and maps
- **DVN-APPS** DESQview aware and specific software
- **DVN-DEV** DESQview software development
- **DVN-DVP** example set up files for programs
- **DVN-TECH** tech support bulletins from QOS and others

Special files of interest at DVNet Headquarters are

- **DVNET.LST** the master listing of all DVNet nodes
- **DVNET.MAP** the master map of who is linked to who
- **DVN-INF.LZH** master policy document and application form
- **17-38.EXT** listing of DESQview echo extracts by subject

Stern was one of the charter members of DVNet and is responsible for approving applications, tracking the distribution paths and maintaining the master listing of software. Access is available on the

# DESQview Support File Distribution Network

To join DVNet, contact Peter Stern at 65' North in Fairbanks Alaska 1:17/38 - (907)452-1460

## USA

| | | | | |
|---|---|---|---|---|
| *65'North | Fairbanks, AK | 1:17/38 | 907-452-1460 | HSTV32 |
| Pil's BBS | Walnut Ridge AR | 1:389/10 | 501-886-1701 | HSTV32b |
| Analog Gate | Sierra Vista AZ | 1:309/9 | 602-458-0451 | HSTV32 |
| Carl's Corner | San Jose, CA | 1:10/1 | 408-248-9704 | HSTV32 |
| Carl's Corner | San Jose, CA | 1:10/2 | 408-248-0198 | 2400 |
| SF PCUG BBS | San Francisco CA | 1:1/310 | 415-621-2609 | HSTV32RE |
| CCB II | El Segundo CA | 1:102/540 | 310-333-8392 | HST |
| Central Computer Banks | Tujunga CA | 1:102/581 | 818-352-2993 | HSTV32b |
| SeaHunt BBS | San Francsico, CA | 1:125/20 | 415-431-0227 | HST |
| DCC BBS | Benecia CA | 1:161/502 | 707-746-5820 | HSTV32 |
| Gandalf's | El Cajon CA | 1:202/302 | 619-466-9505 | HSTV32 |
| Microline BBS | Sacramento CA | 1:203/529 | 916-392-4030 | V32 |
| Sirus System BBS | Citrus Heights CA | 1:203/46 | 916-725-8578 | HSTV32 |
| Stingray! | Clovis CA | 1:205/12 | 209-298-9461 | HST |
| Bertha Board | Manteca CA | 1:208/1 | 209-823-0093 | HST |
| Village Vet | Westlake Vlg CA | 1:102/1005 | 805-496-4695 | HSTMO |
| World Peace BBS | Denver CO | 1:104/415 | 303-320-4822 | H96V32 |
| Prgrmmrs Playhouse | Colo Sprngs CO | 1:128/60 | 719-380-8813 | HST |
| Treasure Island | Danbury,CT | 1:141/730 | 203-791-8532 | HSTV32 |
| Ascii Neighborhood | ,W Haven CT | 1:141/333 | 203-934-9852 | HST |
| Death's Domain | Enfield CT | 1:142/629 | 203-749-6103 | HSTV32 |
| Plainfield News | Plainfield CT | 1:327/452 | 203-564-8579 | HST |
| Stan's Shack | Jacksonville FL | 1:112/5 | 904-768-3854 | HSTV32 |
| The Pub | N Miami Beach FL | 1:135/52 | 305-949-6089 | 2400 |
| Jos' Lounge | Naples FL | 1:3630/40 | 813-592-1535 | HSTV32 |
| Other World | Tallahassee FL | 1:3605/56 | 904-668-1092 | HST |
| Midnight BBS | Pembroke Pines FL | 1:369/37 | 305-987-7873 | HST |
| archonRAINBOW | Ft Myers FL | 1:371/13 | 813-939-3394 | HST |
| Strat's Asylum | Cocoa Beach FL | 1:374/12 | 407-799-0390 | CSPV32b |
| E.I.L.C. BBS | Palm Bay FL | 1:374/60 | 407-676-2998 | HSTV32b |
| Galaxy Info System | Atlanta GA | 1:133/411 | 404-671-1024 | V32 |
| Open Window | Laie HI | 1:345/1 | 808-293-9547 | V32 |
| Icarus | Iowa City,IA | 1:283/657 | 319-337-9878 | HSTV32 |
| Midrange System | Mt Prospect IL | 1:115/439 | 708-439-9679 | HSTV32 |
| Someplace BBS | Indianapolis IN | 1:231/120 | 317-353-9981 | HST |
| Joker'sWild | Indianapolis IN | 1:231/510 | 317-843-1371 | HSTV32 |
| The Jokerman BBS | Bluffton IN | 1:236/12 | 219-824-5628 | V32 |
| Ft Polk Info | Fort Polk LA | 1:380/15 | 318-537-3620 | HST |
| Silver Streak RBBS | NewOrleans LA | 1:396/15 | 504-888-6515 | HST |
| Rainbow's Edge | Westwood MA | 1:101/1 | 617-551-0495 | HSTV32 |
| Pioneer Valley PCUG1 | Amherst MA | 1:321/109 | 413-256-1037 | HST |
| Denis's Opus | Ayer MA | 1:322/2 | 508-772-6373 | HSTV32 |
| Waystar BBS | Marlborough,MA | 1:322/14 | 508-481-7147 | HST |
| The Business Card | Lawrence MA | 1:324/121 | 508-682-5329 | HSTV32 |
| Addict's Attic | Germantown MD | 1:109/423 | 301-428-8998 | V32 |
| AviTechnic | Lutherville MD | 1:261/662 | 301-252-0717 | HSTV32 |
| Programmers' Attic | Will MI | 1:159/850 | 517-655-3347 | HST |
| K C Central BBS | Raytown MO | 1:280/22 | 816-356-0901 | HSTV32 |
| Summit Forum | Holt's Summit MO | 1:289/13 | 314-896-5393 | HSTV32 |
| Big Bang Theory | Jackson MS | 1:3632/4 | 601-366-1664 | HSTV32b |
| Psychotronic BBS | Durham NC | 1:3641/1 | 919-286-7738 | HSTV32 |
| SANDHILLS BBS | Cameron NC | 1:151/2010 | 919-245-4948 | 2400 |
| Programmer's Asstnt | Charlotte NC | 1:379/4 | 704-544-0010 | HST |
| Jon's LateNite BBS | Havelock NC | 1:3629/269 | 919-447-2892 | HSTV32 |
| The Toy Room BBS | Hudson NH | 1:132/159 | 603-886-5722 | HST |
| University BBS | Eatontown NJ | 1:107/411 | 908-544-8193 | HSTV32b |
| Maple Shade Opus | Maple Shade NJ | 1:266/12 | 609-482-8604 | HSTV32 |
| Dragon's Mailbox | Bound Brook NJ | 1:2605/611 | 908-469-4603 | HSTV32b |
| Capital City | Burlington NJ | 99:9230/1 | 609-386-1989 | HSTV32 |
| Capital City | Burlington NJ | 8:950/10 | 609-386-1989 | HSTV32 |
| Capital City | Burlington NJ | 1:266/21 | 609-386-1989 | HSTV32 |
| Atrium Way | Morris Plains NJ | 1:2606/583 | 201-984-5555 | HSTV32 |

# DESQview Support File Distribution Network

To join DVNet, contact Peter Stern at 65' North in Fairbanks Alaska 1:17/38 - (907)452-1460

| | | | | |
|---|---|---|---|---|
| HourGlass | Ridgewood NJ | 1:2604/101 | 201-612-0559 | HSTV32 |
| Construction Net #6 | Los Alamos NM | 1:15/20 | 505-662-0659 | HST |
| dBest Western Star 1 | Las Vegas NV | 1:209/1 | 702-253-9917 | HST |
| $in City Bit Pit | Las Vegas NV | 1:209/711 | 702-647-4427 | HSTV32 |
| Danger Zone | Reno NV | 1:213/720 | 702-828-4907 | HSTV32 |
| Rivendell * TAP/1 | Syracuse NY | 1:260/1 | 716-646-0227 | HSTV32 |
| Ulysses System | Rome NY | 8:954/401 | 315-339-5591 | HSTV32 |
| The Mountain Top | Cincinnati OH | 1:108/107 | 513-921-5568 | HST |
| Blue Byte BBS | Enon OH | 1:110/270 | 513-864-1143 | HST |
| NHampton Data | Cuyahoga Falls OH | 1:157/533 | 216-928-8565 | HSTV32 |
| Computer Room | Pickerington OH | 1:226/110 | 614-861-8377 | HSTV32 |
| Steel Valley BBS | Girard OH | 1:237/500 | 216-545-2318 | HSTV32 |
| Ascension | Norman OK | 1:147/46 | 405-360-4261 | HST |
| Bink of an Aye | Portland,OR | 1:105/42 | 503-297-9043 | PEPV32MO |
| P C Support | Portland,OR | 1:105/66 | 503-297-9078 | 2400 |
| Atarian BBS | Portland,OR | 1:105/10 | 503-245-9730 | HSTV32 |
| Busker's Boneyard | Portland,OR | 1:105/14 | 503-771-4773 | PEP |
| Busker's Boneyard | Portland,OR | 1:105/41 | 503-775-7926 | HSTV32 |
| Dimension 7 | Eugene OR | 1:152/69 | 503-461-2219 | HST |
| Meeting Place | Pittsburgh PA | 1:129/45 | 412-682-7057 | HSTV32b |
| The Other BBS | Harrisburg PA | 1:270/101 | 717-657-2223 | HST |
| Walsh Microsys | Philadelphia PA | 1:273/917 | 215-725-9134 | HST |
| Optical Illusion | Allentown PA | 1:273/603 | 215-797-7409 | HSTV32 |
| U.S.S Intrepid | Spring House PA | 1:273/703 | 215-641-0270 | HST |
| Island Sun | Caparra Heights PR | 1:367/15 | 809-783-9542 | HST |
| Dreadnaught BBS | Columbia SC | 1:376/50 | 803-731-3884 | V32 |
| EET BBS | Nashville TN | 1:116/24 | 615-353-3476 | HSTV32 |
| Conch Opus | Houston,TX | 1:106/357 | 713-667-7213 | HSTPCP |
| Vulcan's Lair | College Station TX | 1:117/345 | 409-693-6406 | HSTV32b |
| Inns of Court | Dallas,TX | 1:124/6101 | 214-458-2620 | HSTV32 |
| Dallas Email | Dallas,TX | 8:930/101 | 214-385-9346 | HSTV32MO |
| Spare Parts | Bedford,TX | 1:130/38 | 817-540-3527 | HST |
| Southern Crossroads | Dallas TX | 1:124/4115 | 214-556-2982 | HSTV32 |
| The Gas Company | Arlington TX | 8:930/201 | 817-265-8938 | HST |
| Wireline | Corpus Christi TX | 1:160/40 | 512-241-1120 | HST |
| Middle Earth | San Antonio TX | 1:382/19 | 512-835-4848 | HST |
| Last Chance TBBS | San Antonio TX | 1:387/822 | 512-822-7519 | HST |
| TSTI INFO NET | Waco TX | 1:388/1000 | 817-799-1570 | HST |
| The Night Shift | Hampton VA | 1:271/245 | 804-723-7280 | HSTMO |
| ThunderBolt BBS | Fredericksburg VA | 1:274/13 | 703-373-9289 | HST |
| Terrapin Station | Norfolk VA | 1:275/13 | 804-489-7450 | HSTV32b |
| The Ozone Layer | Williston VT | 1:325/118 | 802-879-4753 | HSTV32b |
| Pacifier BBS | Vancouver,WA | 1:105/103 | 206-253-9770 | HSTV32 |
| Seattle/Everett Hub | Seattle WA | 1:343/300 | 206-244-8860 | HST |
| S'Qually_Holler's | Renton WA | 1:343/34 | 206-235-0270 | HSTV32b |
| SunDial BBS | Pasco WA | 1:347/7 | 509-545-1789 | HST |
| County Line BBS | W Allis WI | 1:154/100 | 414-476-8468 | HSTV32b |
| The Inn | Chippewa Falls WI | 1:2300/10 | 715-723-3552 | HSTV32b |
| Oregon Trail XRoads | Casper WY | 1:303/5 | 307-472-3615 | H96V32 |

## CANADA

| | | | | |
|---|---|---|---|---|
| Logical Solutions | Calgary AB | 1:134/10 | 403-299-9917 | HST |
| Information Corner | Edmonton AB | 1:342/20 | 403-483-1896 | HST |
| The Exchange | Prince George BC | 1:359/200 | 604-962-5971 | HST |
| Polar Bear Heaven | Winnipeg MB | 1:348/405 | 204-837-9704 | HST |
| Atlantic Access | St John W NB | 1:255/2 | 506-635-1964 | HST |
| AFI Comm | Nepean ON | 1:163/115 | 613-829-0282 | HST |
| Ned's Opus HST | Ottawa,ON | 1:163/211 | 613-523-8965 | HST |
| Tobacco Road | Hamilton ON | 1:244/106 | 616-387-5507 | HST |
| Arcane BBS | Laval PQ | 1:167/116 | 514-687-9586 | HST |

# *DESQview Support File Distribution Network*

To join DVNet, contact Peter Stern at 65' North in Fairbanks Alaska 1:17/38 - (907)452-1460

## EUROPE

| | | | | |
|---|---|---|---|---|
| The HEKOM Board | (Netherlands) | 2:500/223 | 31-3483-4072 | V32 |
| HEKOM RBBS | Harmelen Netherlands | 2:286/303 | 31-3483-2361 | V32b |
| DATEX | Zoeterwoude Netherlands | 2:281/616 | 31-1715-3158 | HSTV32b |
| Datalink Systems | Groningen ND | 2:282/508 | 31-50-183559 | HSTV32 |
| Kiss Software | Almelo Netherlands | 2:283/314 | 31-05490-27374 | HSTV32 |
| Byteline! Systems | Sliedrecht ND | 2:285/313 | 31-1840-15230 | HSTV32b |
| Copenhagen Online BBS | Denmark | 2:231/116 | 45-38884312 | HSTV32 |
| Road Runner | Manchester UK | 2:250/1 | 44-61-483-4105 | HSTV32MO |
| SW Mail Centre | Exeter UK | 2:255/1 | 44-392-412362 | HSTV32MO |
| Trinity I | Exeter UK | 2:255/112 | 44-392-410210 | 2400 |
| TUG II | Droitwich Worcester UK | 2:253/157 | 44-905-775191 | HST |
| Enigma Variations | Worcester UK | 2:2/544 | 44-905-795002 | HST |
| Aureal Srchlght | Mkt Harborough | 2:254/153 | 0858-466594 | HST |
| Blumenkistl | Vienna Austria | 2:310/10 | 43-222-6040844 | HST |
| Hacker's Lair | Mikkeli Finland | 2:227/2 | 358-55-178-749 | V32 |
| Andi's BBS | Haan FRG | 2:241/4006 | 49-2129-4891 | HST |
| The 49er's | Wuppertal FRG | 2:241/5601 | 49-202-305803 | HST |
| BoersenBox | Friedrichshafen FRG | 2:241/7201 | 49-7541-53191 | HSTV32b |
| Blues Project | Dusseldorf FRG | 2:242/20 | 49-211-5961291 | HSTV32 |
| Median | Berlin FRG | 2:242/36 | 49-30-735148 | HSTV32MO |
| Plutonium BBS | DuesselDorf FRG | 2:242/94 | 49-211-620145 | HSTV32 |
| Maus Aachen 3 | Aachen FRG | @MAUS AC3. | 49-241-514646 | HSTV32b |
| M.U.G.Info Board | Essen FRG | 2:245/1 | 49-201-483735 | HST |
| E.I.S.2 | Frankfurt FRG | 2:247/14 | 49-69-6311235 | HST |
| Data City | Moenchengladbach FRG | 2:247/801 | 49-2166-24468 | HST |
| Radio Kaos M-O | Duisburg FRG | 2:2/324 | 49-203-408799 | HSTMO |
| AVALON BBS | Roethenbach FRG | 2:241/8502 | 49-911-5705983 | PEPV32 |
| Orion MailBox | Widnau SUI | 2:302/903 | 41-71-725188 | HSTV32 |
| The Lys Valley | Wervicq FRA | 2:322/2 | 33-20392225 | HSTV32 |
| Genova 2000 | Genova Italy | 2:332/201 | 39-10-3770080 | V32 |
| Venus | Pavia PV Italy | 2:331/318 | 39-382-575369 | HSTV32 |
| SUBALPINA's_Hub | Torino Italy | 2:334/300 | 39-11-6624400 | HSTV32 |
| Capital City BBS | Haninge Sweden | 2:201/111 | 46-8-7411244 | HST |
| Replicants Factory | Barcelona SP | 2:343/105 | 34-3-219-3452 | 2400 |
| Small BBS | Jerusalem Israel | | 972-2-634203 | V32RE |

## ASIA/PACIFIC

| | | | | |
|---|---|---|---|---|
| Marwick's MadHouse | (Australia) | 3:640/820 | 61-7-870-2972 | PEPV32 |
| Sentry Lane Cove | NSW(Australia) | 3:711/401 | 61-2-428-4687 | PEP |
| Sentry's Shadow | Lane Cove,NSW | 3:711/501 | 61-2-418-6682 | V32 |
| Revelstone BBS | (Australia) | 3:632/348 | 61-3-741-2353 | PEP |
| Southern Mail CBCS | Vict Aust | 3:632/386 | 61-3-725-1621 | PEP |
| COMPUlink | Perth WA | 3:690/628 | 61-9-451-7288 | 2400 |
| Engineer's PitStop | Perth WA | 3:690/652 | 61-9-3837168 | V32b |
| Phone Box | Inglewood S Australia | 3:681/854 | 61-8-3805505 | V32 |
| OZ-Board | Townsville Qld Aust | 3:640/715 | 61-77-21-3592 | PEPV32RE |
| TAIC Maximus | Kowloon(Hong Kong) | 6:700/1 | 85-2-789-1267 | PEPV32 |

***Nodelist Flags***

**MO** Mail Only System - does not accept BBS callers
**RE** Some restrictions to BBS access
**CSP** Compucom
**H96** Hayes V9600 or Ultra if V32 flag
**HST** US Robotics 9600 modem
**PEP** Telebit TrailBlazer 9600 Modem
**V32** CCITT V32 9600 full duplex
**V32b** CCITT V32bis 14400 full duplex .* Special operations contact Sysop for details

first call and the system is unavailable from midnight-3AM Alaska Standard Time.

65' North also provides extracts from the Fidonet DESQview echo, based on popular topics, for those people who don't regularly read the echo. Topics include QEMM QEXT Stealth Caches Video Windows etc.

BBS Participation in DVNet requires a FidoNet compatible mailer link in order to manage the automated distribution of files. The network is managed through an administrative message base/echo.

A complete listing of the member BBS's is published on the 4th of every month in the Fidonet DESQview echo. A complete listing of the files is published every other month. A newfiles added within 30 days listing is published in alternate months.

Operators of Fidonet mailers, may file request the listing using the convention net-node.DVN ... 124-6101.DVN or by using the "magic" file name **DVNET.** A big difference between DVNet and other software distribution networks is each sysop is free to use whatever storage format he desires. For that reason users should expect to use wildcards for program extensions when downloading from the master listing. In other words you may find the programs stored as **DVGLUE.ARC DVGLUE.LZH DVGLUE.PAK DVGLUE.ARJ** etc.

Sysops interested in joining DVNet should obtain **DVN-INF.*** from any member node. This archive contains operational policies, set-up information and an application. DVNet is participating in the recently formed Filebone within Fidonet. This will make it easier for sysops to do "one-stop" shopping for almost of the Fidonet file distribution network software.

**DVNet Files via Internet**

In addition to Fidonet distribution, most of the DVNet software is also being uploaded to **Simtel20** for users who have FTP access. The programs are usually found either in the **msdos.desqview** or **msdos.info** directories.

**wsmr-simtel20.army.mil**
192.88.110.20
pd1:.desqview

**wuarchive.wustl.edu**
128.252.135.4
mirror/msdos/desqview

**isca01.isca.uiowa.edu**
128.255.16.175
simtel/msdos/desqview

**oak.oakland.edu**
141.210.10.117
pub/msdos/desqview

**EUROPE**
**nic.funet.fi**
128.214.6.100
/msdos/interfaces/desqview

**src.doc.ic.ac.uk**
146.169.3.7
cannot confirm location

**AUSTRALIA**
**rana.cc.deakin.oz.au**
128.184.1.4
pub/PC/simtel-20/desqview

Naturally, any caller dialing any BBS in DVNet can access a wealth of utilities and programs revolving around QEMM and DESQview. The accompany table lists all BBS systems worldwide that participated in DVNet as of March 1, 1992. **stern@ims.alaska.edu** HSTV32 **907-452-1460**

## PRODUCT SUPPORT BBS

From the number of inquiries we receive on the subject, and the strikingly poor examples we generally see, we have to conclude that THE most mystifying animal in the online world is the product support BBS. It should by rights be the simplest to setup, the simplest to operate, and the simplest to maintain. And we can't picture what the problem is, but there are so many BAD ones out there that if it were not for a number of really GOOD ones, we would assume we were missing something here.

The formula is pretty basic:

**1.** Assemble all your product information sheets, press releases, and new product announcements and put them in the BULLETINS area of the BBS.

**2.** Take any support files, drivers, etc., you normally mail out for free (and pay the postage and packaging to do so), and any lengthy technical descriptions, application notes, etc. and put them in the FILE area for download.

**3.** Survey your product support people and draft a list of the top 30 questions asked by callers. Any support phone jock for ANY product can tell you that 90% of all calls are to ask the same 10 questions. Take the top 30, write down the answers, and put it in an accessible area.

**4.** Open up a message area for general questions. Answer these publicly or privately as the case merits.

**5.** Open another message area for private questions. Answer these privately.

**6.** Leave the door open for ordering more product. Many products have accessories, add-ons, etc. that can be necessary for specific applications. But face it, there is not much profit in adapter cables in onesy twosy quantities. Consider an online ordering process where the caller who KNOWS what he wants can pick it off a list, enter a credit card number, and make it appear on his doorstep - even if he decides to buy at 1:00 AM. Many of today's BBS packages make this fairly easy to setup. Some systems are so automated that the BBS clears the credit card charge, prints out the shipping invoice, and does everything but run the postage meter to send it out. Selling piece parts can actually be a profit center - if you don't have staff spending a lot of time filling the order. The BBS can help, and it can be a convenience for the knowledgeable user.

For some inexplicable reason, there is a tendency to NOT allow product support questions on the BBS. It's not that we don't get it - this IS stupid. Anyone calling voice for help must call during the hours telephone support is operating, wait the "hold" period, or leave their number for a callback. Worse, someone has to ANSWER the telephone, try to figure out what the problem is on the fly, and go on.

Bulletin boards are inherently time machines. Callers can of course call voice support if they want to know right now. But often, the support question just isn't time critical. They can write up a message describing the problem or question, and leave it on the BBS. Your support people can answer it AT THEIR LEISURE without the pressure of having to come up with an answer right this minute. If, as is often the case, the support person does need more information than that supplied, the answer is CALL ME VOICE TO DISCUSS THIS PROBLEM. I NEED MORE INFORMATION.

Many companies seem to view answering questions on the support board as a cost. It is not. Every question answered THAT way is less expensive to deal with - in all cases - than dealing with it real time on the telephone. The concept is to let the machine deal with the routine common questions and problems, and free your live support people who draw a wage, social security, unemployment, medicare/medicaid, etc.for the real thorny ones - (you know, where the caller DIDN'T CHANGE A THING - REALLY).

Gary Barr of Evansville, Indiana operates the **Digicom BBS** at **(812)479-1310**. He's amassing quite a collection of online text publications that is interesting. But he's also compiling and verifying a list of product support bulletin boards from both commercial and shareware sources. We're pleased to present, with his permission, his list of **249** product support BBSs.

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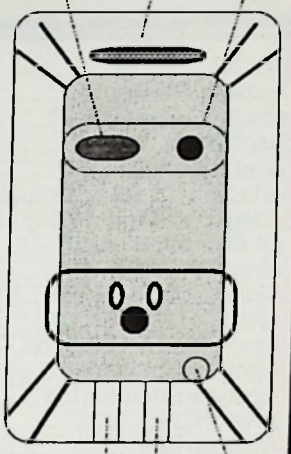

For $69.00 VOICE orders, call DELTRONIX ENTERPRISES
26861 Trabuco, E161C, Mission Viejo, CA 92691
714-380-8969 Extension #2

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Tel. & Fax: 408/733-0801

# PRODUCT SUPPORT BULLETIN BOARDS

This list compiled by Gary Barr of Evansville Indiana - The Digicom BBS 1:2320/200 at **(812)479-1310**.

| | | | | |
|---|---|---|---|---|
| 3COM | 408-492-1790 | 24 | MAGNETIC PRODUCTS | CA |
| Abacus Concepts | 616-698-8106 | 24 | | |
| Abaton Technology | 415-438-4650 | 24 | | |
| Accolade | 408-296-8800 | 24 | GAMING SOFTWARE | |
| Acer America | 800-833-8241 | 24 | COMPUTERS & MONITORS | CA |
| Adaptec | 408-945-7727 | 24 | DISK CONTROLLERS | |
| Advanced Digital Corp | 714-894-0893 | 24 | | |
| All Computer | 416-960-8679 | 24 | | |
| Alloy | 508-460-8140 | 24 | TAPE DRIVES | |
| Alpha Software | 617-229-2915 | 24 | | |
| Altima | 415-356-2456 | 24 | | |
| American Megatrends | 404-446-3665 | 24 | AMI BIOS, MOTHERBOARDS | GA |
| Apogee Software | 508-365-2359 | 96 | GAMES,KEEN,SECRET AGENT | |
| Applied Engineering | 214-241-6677 | 24 | | |
| Artisoft | 602-293-8065 | 24 | LANTASTIC NETWORKING | AZ |
| Ashton-Tate | 408-431-2275 | 24 | DBASE | |
| Ask Sam Systems | 904-584-8287 | 24 | | |
| AST Research | 714-727-4723 | 24 | COMPUTER SYSTEMS | CA |
| ATI Technologies | 416-756-4591 | 24 | VIDEO CARDS/MODEMS | |
| AT&T Support | 201-769-6397 | 24 | COMPUTERS | NJ |
| Automated Design Systems | 404-394-7448 | 24 | | GA |
| Award | 408-371-3139 | 24 | BIOS | CA |
| Beagle Bros | 619-558-6151 | 24 | APPLE SOFTWARE | CA |
| Blackmond Software | 505-589-0319 | 96H | RAMAIL, CCTRX | |
| Boca Research | 407-241-1601 | 24 | MEMORY CARDS,MODEMS | FL |
| Borland | 408-439-9096 | 24 | C,QUATTRO, | CA |
| Bourbaki | 208-342-5823 | 24 | | |
| Brightbill Roberts | 315-472-1058 | 24 | SOFTWARE TOOLS | |
| Brightwork Development | 914-667-4759 | 24 | | NY |
| Brown Bag Software | 408-371-7654 | 24 | | CA |
| Buttonware | 206-454-7875 | 96 | PCFILE,PCCALC,PCTYPE | WA |
| Byte Magazine | 617-861-9764 | 96 | BYTE MAGAZINE UTILITIES | MA |
| Calcomp | 714-821-2359 | 24 | DIGITZERS | CA |
| Canon USA Inc. | 516-488-6528 | 24 | PRINTER DRIVERS | |
| Campbell Services | 313-559-6434 | 24 | | MI |
| Cardz | 604-734-5400 | 96H | FRACTERM COMM SOFTWARE | BC |
| Central Point | 503-690-6650 | 24 | PC TOOLS | OR |
| Cheyenne Software | 516-484-3445 | 24 | | NY |
| Chipsoft | 619-453-5232 | 24 | | CA |
| Clarion Software | 305-785-9172 | 24 | | FL |
| Clear Software | 617-965-5019 | 24 | | MA |
| Codenoll | 914-965-1972 | 24 | | NY |
| Colorado Memory Systems | 303-679-0650 | 24 | TAPE BACKUPS | CO |
| Communications Research | 504-926-5625 | 24 | | LA |
| Complete PC | 408-434-9703 | 24 | MODEMS,FAX,SCANNERS | CA |
| Computer Peripherals | 805-499-9646 | 24 | MODEMS | |
| Computone | 404-664-1210 | 24 | | GA |
| Comtrol | 612-631-7613 | 24 | | MN |
| Continental Software | 1-9-386-5218 | 24 | REMOTEACCESS BBS | |
| CNET | 408-954-1787 | 24 | | CA |
| Cardinal Technologies | 717-293-3074 | 96V | CARDINAL MODEMS/FAXS | |
| Citizens | 213-453-7564 | 24 | PRINTERS | CA |
| Coconut Computing Inc | 619-456-0815 | 24 | COCONET BBS SOFTWARE | CA |
| Computer Peripherals | 805-499-9646 | 96V | MODEMS | |
| CORE International | 407-241-2929 | 24 | | FL |
| Corel System | 613-728-4752 | 96 | COREL DRAW | |
| Cornerstone | 408-435-8943 | 24 | | CA |
| Creative Labs | 408-428-6660 | 96V | SOUNDBLASTER MUSIC CARD | CA |
| Cumulus | 216-464-3019 | 24 | | OH |
| DAC Software | 214-931-6617 | 24 | DAC EASY ACCOUNTING | TX |
| DAK Mail Order | 818-715-7153 | 24 | MAIL ORDER COMPUTERS | |
| Dariana Technology Group | 714-994-7410 | 24 | | CA |
| Data Access | 305-238-0640 | 24 | | FL |

# PRODUCT SUPPORT BULLETIN BOARDS

This list compiled by Gary Barr of Evansville Indiana - The Digicom BBS 1:2320/200 at **(812)479-1310.**

| | | | | |
|---|---|---|---|---|
| Data Ease Int'l | 203-374-6302 | 24 | | CT |
| Datastorm | 314-443-3282 | 96 | PROCOMM, | MO |
| Data Technology | 408-942-4197 | 24 | HD CONTROLLERS | CA |
| David Systems | 408-720-0406 | 24 | | CA |
| DCA | 404-740-8428 | 96 | CROSSTALK | GA |
| Delphi | 800-365-4636 | 24 | DELPHI ONLINE SERVICE | CA |
| Digiboard | 612-922-5604 | 24 | | MN |
| Digital Vision | 617-329-8387 | 24 | | MA |
| Distibuted Processing Tech | 407-831-6432 | 24 | | FL |
| DTK | 818-333-6548 | 24 | DTK MOTHERBOARDS | CA |
| Dynamic Microprocessor | 516-462-6638 | 24 | | NY |
| Eagle Nest | 904-777-8757 | 96H | EAGLE EDITOR | |
| Eagle Soft | 812-425-6950 | 96H | SHOPPERS ASSISTANT | |
| Emac | 510-683-2984 | 24 | | CA |
| Emerald Systems | 619-673-4617 | 24 | | CA |
| Enable Software | 518-877-6316 | 24 | | |
| eSoft Inc | 303-699-8222 | 96 | TBBS BBS SOFTWARE | CO |
| Everex | 415-683-2984 | 96 | COMPUTERS,MODEMS | CA |
| Fifth Generation Systems | 504-295-3344 | 24 | FASTBACK,LONDON BRIDGE | LA |
| Fresh Technology | 602-497-4235 | 24 | | AZ |
| Future Domain | 714-253-0432 | 24 | | CA |
| FutureSoft Engineering | 713-588-6870 | 24 | | TX |
| Galacticomm | 305-583-7808 | 96V | MAJOR BBS SOFTWARE | FL |
| GAP Development Company | 714-493-3819 | 96V | GAP BBS SOFTWARE | CA |
| Gateway BBS | 605-232-2109 | 96V | GATEWAY COMPUTERS | |
| Gazelle Systems | 801-375-2548 | 24 | | UT |
| Gateway Communications | 714-863-7097 | 24 | | CA |
| GEcho | 316-263-5313 | 96D | FIDO MAIL PROCESSOR | KS |
| GEnie Information Services | 800-638-8369 | 24 | GENIE ONLINE SERVICE | CA |
| Genoa | 408-943-1231 | 24 | TAPE BACKUPS | CA |
| Gensoft Development | 206-562-9407 | 24 | | WA |
| Gibson Research | 714-830-3300 | 24 | SPINRITE | CA |
| Global Village Communication | 415-329-9286 | 24 | | CA |
| Great American Software | 603-889-7292 | 24 | | |
| GVC Technologies | 201-579-2380 | 96V | MODEMS | NJ |
| Hayes Microcomputer | 800-874-2937 | 96V | MODEMS | GA |
| Hayes Microcomputer | 404-446-6336 | 96V | MODEMS | GA |
| HDC Computer | 206-869-2418 | 24 | | WA |
| Headland Technology | 415-656-0503 | 24 | | CA |
| Hercules Computer | 415-540-0621 | 24 | | CA |
| IBM | 404-835-6600 | 24 | IBM COMPUTER PRODUCTS | GA |
| IGC | 408-441-0386 | 24 | | CA |
| IMSI Software | 415-454-2893 | 24 | | CA |
| Infochip Systems | 408-727-2496 | 24 | | CA |
| Informix | 913-492-2089 | 24 | | MO |
| InfoShare | 703-803-8000 | 96H | FALKEN BBS SOFTWARE | VA |
| Innovative Data Concepts | 215-357-4183 | 24 | TCXL | PA |
| Intel | 503-645-6275 | 96V | MATHCO,MODEM,FAX,CHIPS | OR |
| Intracorp | 305-378-8793 | 24 | | FL |
| Iomega | 801-778-4400 | 24 | | UT |
| Irwin Magnetics | 313-930-9380 | 24 | TAPEBACKUPS | MI |
| Jetform | 613-563-2894 | 24 | | |
| Kodiak Technology | 408-452-0677 | 24 | | CA |
| LAN Systems | 801-373-6980 | 24 | | UT |
| Laser Go | 619-450-9370 | 24 | | CA |
| Lattice | 708-916-1200 | 24 | | IL |
| Leading Edge | 508-836-3967 | 24 | COMPUTER SYSTEMS | |
| Logical Connection | 504-295-3344 | 24 | | LA |
| Logitech | 415-795-0408 | 24 | MOUSE,SCANNERS | CA |
| Mace, Paul Software | 714-240-7459 | 24 | MACE UTILITIES | CA |
| Madge Networks | 408-441-1340 | 24 | | CA |
| Main Lan | 407-331-7433 | 24 | | FL |
| Matrix Software Technology | 617-569-3787 | 24 | | MA |

# *PRODUCT SUPPORT BULLETIN BOARDS*

This list compiled by Gary Barr of Evansville Indiana - The Digicom BBS 1:2320/200 at **(812)479-1310**.

| | | | | |
|---|---|---|---|---|
| Max Logic | 415-683-3703 | 24 | | CA |
| Maxi Host Support | 209-836-2402 | 24 | MAXI HOST BBS SOFTWARE | |
| Maxtor/Miniscribe | 303-678-2222 | 24 | HARD DRIVES | CO |
| Maynard Electronics | 407-263-3502 | 24 | TAPE BACKUPS | FL |
| McAfee Assoc | 408-988-4044 | 96D | VIRUS PROTECTION | CA |
| Mediagenic | 415-329-7684 | 24 | | CA |
| Micro Display Systems | 612-438-3513 | 24 | | MN |
| Micron Technology | 208-368-4530 | 24 | | |
| Micronics | 510-651-6837 | 96V | COMPUTER,MOTHERBOARDS | CA |
| Micropolis Corp | 818-709-3310 | 24 | HARD DRIVES | CA |
| Microrim | 206-649-9836 | 24 | R:BASE DATABASE | WA |
| Microsoft | 206-637-9009 | 24 | WORD,WINDOWS | WA |
| Micro Tech | 314-334-6359 | 24 | | MO |
| Microtest | 602-996-4009 | 24 | | AZ |
| Mitsubishi | 213-324-3092 | 24 | MONITORS | CA |
| Mountain Network Solutions | 408-438-2665 | 24 | TAPE BACKUPS | CA |
| Mouse Systems (MSC) | 415-683-0617 | 24 | MOUSE | CA |
| Multi-Tech Systems | 612-785-9875 | 96V | MODEMS | MN |
| Mustang Software | 805-395-0650 | 96D | WILDCAT BBS SOFTWARE | CA |
| National Semiconductor | 408-245-0671 | 24 | | CA |
| NEC Technologies | 508-635-6328 | 24 | PRINTER DRIVERS | |
| New Media Graphics | 508-663-7612 | 24 | VIDEO CAPTURE BOARDS | |
| Night Owl BBS | 716-881-5688 | 96D | NIGHT OWL CDROM DISK | NY |
| NISCA | 214-446-0646 | 24 | | TX |
| Novell | 801-429-3030 | 96 | NOVELL NETWORKING | UT |
| Number Nine | 617-497-6463 | 24 | | MA |
| OCR Systems | 215-938-7245 | 24 | | PA |
| Okidata | 800-283-5474 | 96 | PRINTERS | |
| Omen Technology | 503-621-3746 | 96 | DSZ - ZMODEM PROTOCOL | OR |
| Ontrack Computer Systems | 612-937-0860 | 24 | HD PREP SOFTWARE | MN |
| Orchid Technology | 510-683-0327 | 24 | VIDEO CARDS | CA |
| Pacific Data Products | 619-452-6329 | 24 | LASER PRINTER PRODUCTS | CA |
| Packard Bell | 818-773-7207 | 24 | COMPUTER SYSTEMS | CA |
| Paperback Software | 415-644-0782 | 24 | | CA |
| Paradise Systems | 415-968-1834 | 24 | VIDEO CARDS | CA |
| Patton & Patton Software | 408-778-9972 | 24 | | CA |
| Perstore Technologies | 602-894-4605 | 24 | PERSTORE CONTROLLERS | AZ |
| Pinnacle Publishing | 206-941-2492 | 24 | | WA |
| Pinnacle Soft | 514-345-8654 | 24 | | VT |
| PKWare | 414-354-8670 | 96D | PKZIP COMPRESSION | WI |
| PLI | 415-651-5948 | 24 | | CA |
| Plus Development | 408-434-1664 | 24 | HARD DRIVES | CA |
| Practical Peripherals | 818-706-2467 | 96V | MODEMS | CA |
| Preferred Publishers | 901-683-5096 | 24 | | TN |
| Priam Systems | 408-434-1646 | 24 | | CA |
| Prime Solutions | 619-272-9240 | 24 | | CA |
| Princeton Graphic Systems | 404-664-1210 | 24 | MONITORS | GA |
| Prometheus Products | 503-624-0743 | 24 | | OR |
| Proteon | 508-366-7827 | 24 | | |
| Pure Data | 214-242-3225 | 96V | | TX |
| Qmail | 901-382-5583 | 96D | QMAIL OFFLINE READER | TN |
| QMS | 205-633-3632 | 24 | PRINTERS | |
| Qualitas | 301-907-8030 | 24 | 386MAX & BLUEMAX | DC |
| Quantum | 408-434-1664 | 24 | | CA |
| Quarterdeck Office Systems | 213-396-3904 | 24 | QEMM386 | CA |
| QuickBBS | 407-896-0494 | 96 | QUICKBBS BBS SOFTWARE | FL |
| Racal Interlan | 508-264-4345 | 24 | | |
| Race | 305-271-2146 | 24 | RACE USER EDITOR (RA) | FL |
| RelayNet National | 301-229-5623 | 96D | RELAYNET MAIL SYSTEM | DC |
| Revelation Technologies | 206-641-8110 | 24 | | WA |
| Rybs Electronics | 303-443-7437 | 24 | | CO |
| Saber Software | 214-361-1883 | 24 | | TX |
| Salt Air BBS | 801-261-8976 | 96 | PCBOARD BBS SOFTWARE | UT |

# PRODUCT SUPPORT BULLETIN BOARDS

This list compiled by Gary Barr of Evansville Indiana - The Digicom BBS 1:2320/200 at **(812)479-1310**.

| | | | | |
|---|---|---|---|---|
| Samsung Info Sys | 408-434-5684 | 24 | COMPUTERS/MONITORS | CA |
| SEAboard | 201-473-1991 | 96 | ARC,SEADOG,AXE | NJ |
| Seagate | 408-438-8771 | 24 | HARD DRIVES,CONTROLLER | CA |
| Searchlight Software | 516-689-2566 | 96 | SEARCHLIGHT BBS SOFTWARE | NY |
| Semware | 404-641-8968 | 96 | QEDIT DOS EDITOR | GA |
| Sharp | 404-962-1788 | 24 | SCANNERS/COMPUTERS | GA |
| Sierra Online | 209-683-4463 | 24 | GRAPHIC ADVENTURE GAMES | |
| Sigma Design | 415-770-0111 | 24 | | CA |
| Silicon Valley Computers | 415-967-8081 | 24 | | CA |
| Sitka | 415-769-8774 | 24 | | CA |
| Softklone | 904-878-9884 | 24 | | |
| Softlogic Solutions | 603-644-5556 | 24 | | |
| Softronics | 719-593-9295 | 24 | | |
| Software Products INTL | 619-450-2179 | 24 | | CA |
| Software Venture | 415-849-1912 | 24 | | CA |
| Solutions Systems | 617-237-8530 | 24 | | MA |
| Spectra Publishing | 408-730-8326 | 24 | | CA |
| Stac Electronics | 619-431-5956 | 24 | STACKER HD SOFTWARE | CA |
| STB Systems | 214-437-9615 | 24 | VIDEO CARDS | TX |
| Sunrise Software | 404-256-9525 | 24 | SUNRISE DOOR SOFTWARE | GA |
| Sunriver | 512-835-8082 | 24 | | TX |
| Supermac Software | 408-773-4500 | 24 | | CA |
| Symantec | 408-973-9598 | 24 | NORTON,PCANYWHERE | CA |
| Sysgen | 408-946-5032 | 24 | | CA |
| Systems Compatibility | 312-670-4239 | 24 | | IL |
| Swan Online | 814-237-6145 | 96V | SWAN COMPUTERS | |
| TEAMate | 213-318-5302 | 24 | TEAMATE UNIX BBS | CA |
| Tecmar | 216-349-0853 | 24 | TAPE BACKUPS | OH |
| Telebit | 408-745-3803 | 96V | MODEMS | CA |
| Telix Support | 416-439-8293 | 96D | TELIX COMM SOFTWARE | |
| Texas Instruments | 512-250-6112 | 24 | PRINTERS,CPUS | TX |
| TheSoft Programming Services | 415-581-3019 | 24 | THEDRAW ANSI SOFTWARE | CA |
| Thomas Conrad | 512-836-8012 | 24 | NETWORKING CARDS | TX |
| Tiara Computer Systems | 415-966-8533 | 24 | NETWORKING CARDS | CA |
| Timeslips | 508-768-7581 | 24 | TIMESLIPS SOFTWARE | |
| TopSoft Software | 502-425-9941 | 96D | BBS DOORS,TOPED | KY |
| Toshiba Printer Products | 714-581-7600 | 24 | PRINTERS | CA |
| Trius | 508-794-0762 | 24 | ASEASYAS SPREADSHEET | |
| True Vision | 317-577-8783 | 24 | | IN |
| Turbo Tax | 619-453-5232 | 24 | TURBOTAX SOFTWARE | CA |
| Unicorn Software | 317-784-2147 | 24 | UNICORN SOFTWARE | IN |
| U S Robotics | 708-982-5274 | 96D | MODEMS | IL |
| Ven Tel | 408-922-0988 | 96V | MODEMS | CA |
| Vermont Microsystems | 802-655-7461 | 24 | | |
| Video Seven | 415-656-0503 | 24 | VIDEO CARDS | CA |
| Visual Business Systems | 404-953-1613 | 24 | | GA |
| Volkswriter | 408-648-3015 | 24 | | CA |
| Wacom | 201-265-4758 | 24 | | NJ |
| Walker,Richer, & Quinn | 206-324-2357 | 24 | TCP/IP SOFTWARE | WA |
| Wallsoft Systems | 212-962-1923 | 24 | | NY |
| Weatherbank | 800-827-2727 | 24 | WEATHER MAP SERVICE | |
| Western Digital | 714-753-1068 | 96V | CONTROLLERS,HARD DRIVE | CA |
| White Water Systems | 708-328-9442 | 24 | | IL |
| Windows Tech Support | 206-637-9009 | 24 | WINDOWS/MICROSOFT | WA |
| Wordperfect | 801-225-4414 | 24 | WORDPERFECT,DRAWPERFCT | UT |
| Wordtech | 415-254-1141 | 24 | | CA |
| Wyse | 408-922-4400 | 24 | TERMINALS/COMPUTERS | CA |
| Xyquest | 508-667-5669 | 24 | CORRECT GRAMMER | |
| XTree | 805-546-9150 | 24 | XTREE/XTREE GOLD | |
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| BBS LIST TOPIC | LIST AUTHOR/EDITOR | CONTACT BBS | TELEPHONE |
|---|---|---|---|
| Austin Area BBS List AC 512 | Michael Allen Menoskey | -=ACE*BBS=- | (512)258-9989 |
| Ham/Amateur Radio BBS | Stan Staten | 3WINKs BBS | (301)590-9629 |
| Tulsa Oklahoman Area BBS List | Linda Hargraves | Access America | (918)747-2542 |
| Autocad Related BBS | Jason Osgood | Alacrity BBS | (206)643-5477 |
| Houston Area 713 | David E. Wachenschwanz | Atomic Cafe BBS | (713)530-8875 |
| Baltimore Area 301 | Phillip Bailey | Baltimore BBS News | (301)633-7870 |
| Medical Issues BBS | Edward Del Grosso | Black Bag | (302)731-1998 |
| Desktop Publishing BBS | Frank Atlee | Byrds Nest | (703)671-8923 |
| Republic of South Africa | Henk WOlsink | Catalyst BBS | (041)34-1122 |
| Engineering Related BBS | Arthur Petrzelka | Computer Plumber | (319)337-6723 |
| San Diego, CA AC 619 | Ron Dipold | Computor's Edge | (619)573-1675 |
| Ontario Area 705 | Alex Draper | Cottage Country BBS | (705)835-6192 |
| U.S.S.R. BBS List | Serge Terekhov | Court Crimson King | 7-3832-356722 |
| Portland Oregon BBS | Lisa Gronke | DawGone Disgusted | (503)297-9145 |
| Technical Support BBS List | Gary Barr | Digicom BBS | (812)479-1310 |
| Rhode Island Area 401 | Mike Labbe | Eagle's Nest | (401)732-5292 |
| Seattle AC 206/West Washington | Bob Dinse/Nanook | Eskimo North | (206)367-3837 |
| Amiga BBS Lists | Captain Chet Solace | Exactus Info Service | (707)524-2548 |
| BBS With Handicapped Focus | Bill McGarry | Handicap News BBS | (203)337-1607 |
| Handicapped Issues BBS | Richard Barth | HEX BBS | (301)593-7357 |
| Central California Area 805 | Larry Honore | His Board | (805)652-1478 |
| Chicago | David Nathan | HURK BBS | (708)801-0823 |
| Atlanta Area 404 | Rodney Aloia | INDEX System | (404)924-8472 |
| Washington DC BBS List | Mike Focke | Interconnect | (703)425-2505 |
| Selected BBS | Joseph Caplinger & Son | J&J's BBS | (513)236-1229 |
| Wisconsin 608 | | JW-PC Dataflex.HST | (608)837-1923 |
| Open Access UNIX Site List | Phil Eschallier | LGNP1 (login:BBS) | (215)348-9727 |
| Rochester NY AC 716 | Tracy Logan | Logan's Run | (716)256-2659 |
| Orlando Florida AC 407 | Matt Drury | London BBS | (407)423-5226 |
| Maine BBS | Eric Rodzen | MaineNET BBS | (207)767-1273 |
| Raleigh NC Area Code 919 | Mike Stroud | Micro Message Svc. | (919)779-6674 |
| MIDI Music BBS | Lee Smith | MIDImaze BBS | (615)877-5528 |
| NY/NJ/CT/PA/DE | | Network One BBS | (212)628-5486 |
| Geneology Related BBS | Richard A. Pence | NGS-CIG | (703)528-2612 |
| Atlanta Area 404 | Online Atlanta Society | OASIS | (404)627-2662 |
| OS/2 BBS Systems | Pete Norloff | OS2/Shareware BBS | (703)385-4325 |
| ASP BBS Member List | Bob Ostrander | PBS-BBS | (317)856-2087 |
| The List National BBS List | James Toro | PDSLO (The List) | (516)938-6722 |
| New Jersey Area 201/609/908 | Wayne R. Morton | Praedo BBS | (609)953-0769 |
| Apple II BBS with Internet con | Morgan Davis | pro-sol | (619)670-5379 |
| Denver Colorado AC 303 | Bob Voorhees | Professional System | (303)740-2223 |
| Kitsap County Washington | Michael Schuyler | Quicksilver BBS | (206)780-2011 |
| List of Gay/Lesbian BBS | Eric Blair | S-TEK BBS | (514)597-2409 |
| Area Code 215 - Philadelphia | Ron Brandt | Satalink BBS | (215)364-3324 |
| Area Code 609 - New Jersey | Ron Brandt | Satalink BBS | (215)364-3324 |
| Dallas/Ft Worth Area 214/817 | Mark Robbins | Second Sanctum | (817)784-1178 |
| South Florida Area 305/407 | Eric Thav | Silicon Beach BBS | (407)276-3750 |
| Southern California | Mike Hefferman | SOCAL Corner | (213)422-7942 |
| Kansas City Area 816/913 | Roy Timberman | Sound Advice | (816)436-4516 |
| New Orleans BBS List | Jeff Jones | Southern Star BBS | (504)885-5928 |
| Astronomy/Space BBS | John Pickens | Starbase III BBS | (209)432-2487 |
| Chicago | Colby Jordan/Peter Anvin | Stillwaters | (708)403-2826 |
| South Jersey Area 609 | Dave Schubert | The Casino EBBS | (609)561-3377 |
| Arkansas Area 501 | Bob Underdown | The Gaslight BBS | (501)444-8420 |
| Graphical User Interface BBS | David Shapiro | The Gooey (GUI) BBS | (212)876-5885 |
| Milwaukee Area 414 | Jim Belot | The Keep BBS | (414)372-3488 |
| National Adult BBS List | Clayton Manson | Titan BBS 1:3612/140 | (904)476-1270 |
| Detroit Area 313 | Horst Mann | Tony's Corner | (313)754-1131 |
| Darwin National BBS List | Meade Frierson | USBBS Update Line | (202)547-3037 |
| 1300 Wildcat! BBS | Jim Harrer | Wildcat! HQ | (805)395-0650 |

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**Boundary Waters BBS (218)365-6907** Ely, Minnesota since 04/01. Sysop: Gary Knopp. Using QuickBBS 2.75 with 2 lines on MS-DOS 80386 with 130 MB storage. Supra at 14400 bps. No fee. Complete information for Northwoods recreation * Boundary Waters Canoe Area * Superior National Forest * Wilderness Canoe Trips * Fishing * Boating * Camping * Sleddog Trips * Cross country skiing * Resorts * Northwoods Catalog Sales * ** FREE **

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**The Comm-Post (303)534-4646** Denver, Colorado since 06/86. Sysop: Brian P. Bartee. Using TBBS 2.2 with 8 lines on MS-DOS 80386 with 2500 MB storage. U.S. Robotics at 14400 bps. $50 Annually fee. An ASP-Approved BBS with one of the finest collections of IBM-Compatible Shareware. Many areas have free download access including an extensive library of Astronomy Software & Data files. Access to hundreds of Message Echos. The Friendliest BBS around!

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**Stoic Financial BBS (303)940-7746** Wheat Ridge, Colorado since 08/91. Sysop: Richard Hiatt. Using WildCat 1.03 with 1 line on MS-DOS 80386 with 120 MB storage. Hayes at 2400 bps. No fee. Financial Information on all markets, commodities, stocks, futures and options. Gif charts, spreadsheet ready templates, 1-2-3 ready price history files. Dir. of Investment & Trading Professionals. Educational & Technical info on trading strategies.

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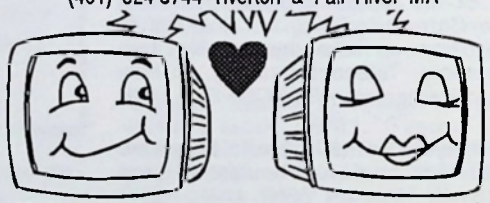

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# BOARDWATCH MAGAZINE

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| Magpie BBS | (212)420-0527 | Support/Demo System for Magpie BBS/Conferencing Software | Steve Manes | New York ,NY |
| MaxiHost Support BBS | (209)836-2402 | MaxiHost BBS - small, very easy to run BBS | Don Mankin | San Ramon ,CA |
| McAfee Associates BBS | (408)988-4004 | Computer Virus Information - VIRUSCAN and CLEANUP Programs | John McAfee/CVIA | Santa Clara ,CA |
| METRO Online Entertainment | (212)831-9280 | 32 line DLX with City Guide/Ski Database - Matchmaker - Chat | Bruce Kamm/Metro Online Services | New York City ,NY |
| Micro Foundry, The | (415)598-0398 | 2.2 GB Downloads - Your Online Software Source - Boardwatch | Thomas Nelson/Clockwork Software | San Jose ,CA |
| Micro Message Service | (919)779-6674 | USA Today/Boxoffice Magazine - Large Download Area | Mike Stroud | Raleigh ,NC |
| Micro Tech BBS | (314)334-6359 | Support for OSIRIS Multiline BBS Software - IRIS Mail | Micro Tech | Cape Girardeau ,MO |
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| Microsystems Software Inc. | (508)875-8009 | HandiWare Software for Handicapped - CodeRunner C Utilities | MSI - Reed Lewis | Framingham ,MA |
| Midwest MIDI 1:147/1007 | (405)733-3102 | MIDI Distribution Net - MIDI sequences and files | John Fordenbacher | MWC ,OK |
| Minnesota Spacenet | (612)920-5566 | Minnesota Space Frontier Society - NASA News | Ben Husset | Minneapolis ,MN |
| MOG-UR'S EMS, The | (818)366-1238 | 5 Lines - 8 Networks CD-ROMS - 2.8 GB Hub Services HST/V.32 | Tom Tcimpidis | Granada Hills ,CA |
| Movie BBS | (718)939-5462 | Movie Reviews and Information - Television | Clarke Ulmer | New York ,NY |
| N.A.C.D. BBS | (912)246-3280 | Cave Scuba Diving - Superb Special Topic System | National Assoc. of Cave Divers | Gainsville ,FL |
| N8EMR Ham BBS | (614)895-2553 | login:hbbs HAM Radio/AMSAT Unix System - Satellite/Packet | Gary Sanders | Westerville ,OH |
| NAPLPS Graphics BBS | (613)727-5272 | NAPLPS Graphics Terminal and Editor Software | MicroStar Corp. | Nepean ,Ontario |
| NARDAC BBS | (804)445-1627 | Zenith Computer Support - List of Federal Micro User Groups | Navy Regional Data Automation Center | NAS Norfolk ,VA |
| NASA Headquarters Info Tech | (202)453-9008 | Shareware and Technical Info for NASA PC users. | National Aeronautical and Space Admin. | Washington ,DC |
| NASA Spacelink | (205)895-0028 | NASA Educational Affairs Div. - Flight Data/Space History | Marshall Space Flight Center | Huntsville ,AL |
| Nashville Exchange | (615)383-0727 | 12 line TBBS - Games/TDBS Software Development 1.8 GB | Ben Cunningham | Nashville ,TN |
| National Agricultural Library | (301)344-8510 | Agricultural Info/Research Resources | US Department of Agriculture | Beltsville ,MD |
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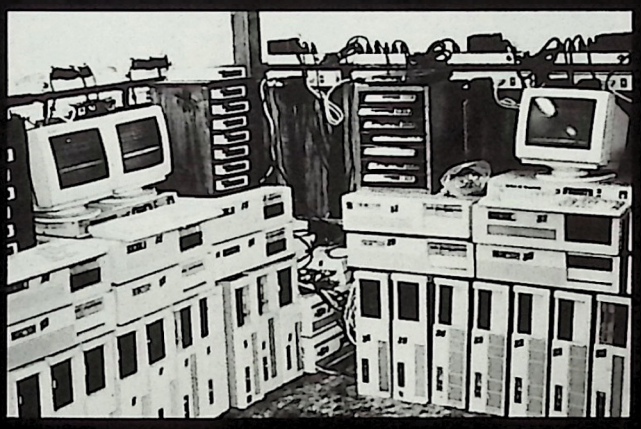

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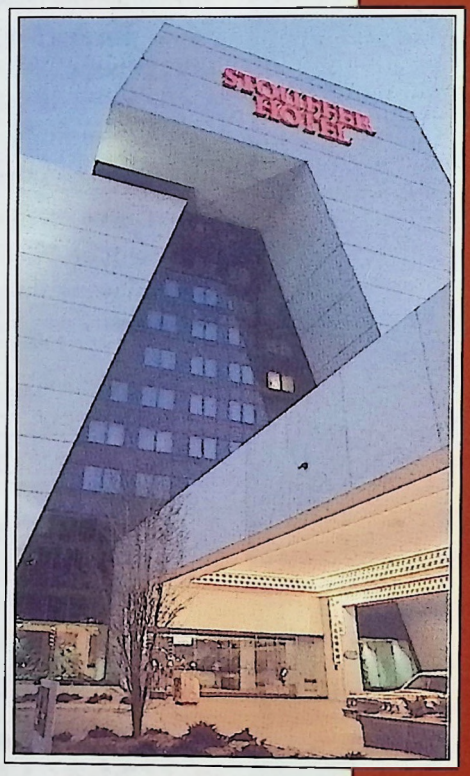


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